Meeting of the Federal Open Market Committee
September 29, 1998

A meeting of the Federal Open Market Committee was held in the offices of the Board of Governors of the Federal Reserve System in Washington, D.C., on Tuesday, September 29, 1998, at 9:00 a.m.

PRESENT: Mr. Greenspan, Chairman
Mr. McDonough, Vice Chairman
Mr. Hoenig
Mr. Ferguson
Mr. Gramlich
Mr. Jordan
Mr. Kelley
Mr. Meyer
Ms. Minehan
Mr. Poole
Ms. Rivlin

Messrs. Boehne, McTeer, Moskow, and Stern, Alternate Members of the Federal Open Market Committee

Messrs. Broaddus, Guynn, and Parry, Presidents of the Federal Reserve Banks of Richmond, Atlanta, and San Francisco respectively

Mr. Kohn, Secretary and Economist
Mr. Bernard, Deputy Secretary
Ms. Fox, Assistant Secretary
Mr. Gillum, Assistant Secretary
Mr. Mattingly, General Counsel
Mr. Baxter, Deputy General Counsel
Mr. Truman, Economist

Messrs. Cecchetti, Dewald, Hakkio, Lindsey, Simpson, Sniderman, and Stockton, Associate Economists

Mr. Fisher, Manager, System Open Market Account

Mr. Winn, Assistant to the Board, Office of Board Members, Board of Governors 1/

Mr. Ettin, Deputy Director, Division of Research and Statistics, Board of Governors

Messrs. Madigan and Slifman, Associate Directors, Divisions of Monetary Affairs and Research and Statistics respectively, Board of Governors

Messrs. Alexander, Hooper, and Ms. Johnson, Associate Directors, Division of International Finance, Board of Governors

Mr. Reinhart, Deputy Associate Director, Division of Monetary Affairs, Board of Governors

Mr. Struckmeyer, Assistant Director, Division of Research and Statistics, Board of Governors

Ms. Low, Open Market Secretariat Assistant, Division of Monetary Affairs, Board of Governors

Messrs. Spillenkothen and Parkinson, 2/ Director, Division of Supervision and Regulation, and Associate Director, Division of Research and Statistics respectively, Board of Governors

Mr. Connolly, First Vice President, Federal Reserve Bank of Boston

Messrs. Eisenbeis, Goodfriend, Hunter, Kos, Lang, and Rolnick, Senior Vice Presidents, Federal Reserve Banks of Atlanta, Richmond, Chicago, New York, Philadelphia, and Minneapolis respectively

Messrs. Judd and Rosengren, Vice Presidents, Federal Reserve Banks of San Francisco and Boston respectively

Ms. Yucel, Research Officer, Federal Reserve Bank of Dallas

1/ Attended portion of the meeting relating to the Committee's disclosure policies.
2/ Attended portion of the meeting relating to developments stemming from the financial difficulties of a large hedge fund.

Transcript of the Federal Open Market Committee Meeting of
September 29, 1998

CHAIRMAN GREENSPAN. We are getting under way a bit early, but I am sure we will use the time productively. Would somebody like to move approval of the minutes? I want to call your attention to the addition of a reference in the minutes to our recent telephone conference. I trust all of you have looked at it and that there is no objection to the way it is worded.

VICE CHAIRMAN MCDONOUGH. Move approval.

CHAIRMAN GREENSPAN. Without objection.

The second item on the agenda involves a continuation of discussions we've had on the issue of disclosure. In its memorandum, the staff winnowed down our earlier considerations, and the options now seem fairly straightforward. There is no urgency to implement any of them, and I think we should continue our discussions until we can reach a consensus of some sort. This is not strictly a matter for a Committee vote. Whatever we do, including nothing, it is important that it reflect a consensus as differentiated from a majority vote. I don't think a change in our procedures should be made by a majority vote because once such a change is made it is very difficult to backtrack. As a result, any change should be something with which everyone feels reasonably comfortable. Having said that, would somebody like to respond to the memorandum, which sets out the issues in a way that does not seem to require a staff briefing? President Hoenig.

MR. HOENIG. Mr. Chairman, after reading the memo and participating in several discussions of this question, my inclination is to go with Option 1. With regard to that option, the simpler and more straightforward the language, the better. Indeed, I would simplify the language even further. For the symmetric alternative, I would say something like "in view of the currently available evidence, the Committee believes that developments are equally likely to warrant a decrease or an increase in the federal funds rate." If the decision were for a tilt, I would have the sentence say "in view of the currently available evidence, the Committee believes that developments are more likely to warrant a decrease/increase than an increase/ decrease in the federal funds rate." I think that wording is understandable and straightforward.

I also would like to see the minutes released even sooner than is contemplated in this memo if that is physically possible. That's because, as I said the last time we discussed this matter, the minutes provide context for the Committee's decision. If we are going to be more transparent, sooner is better than later in that regard. I know there are physical limitations involved in the production of the minutes.

In sum, my preference would be to put simpler language in the directive, release it promptly, and then publish the minutes as soon as we can to give context to our decision.

CHAIRMAN GREENSPAN. I gather by implication that we have concluded in our previous discussions that variations in wording to describe differing degrees of tilt have not served us very well. As you know, in the past we have had hard tilts, medium tilts, tilted tilts, biased tilts, and who knows what else!

MR. HOENIG. We need an interpreter to figure out what all that means. That is true even for us, let alone the public.

CHAIRMAN GREENSPAN. President Guynn.

MR. GUYNN. Mr. Chairman, I share Tom Hoenig's views pretty much down the line. I come to this, as I said last time, with a sense that the more information we can put out promptly, the better. The more quickly markets react, the more the policy uncertainty premiums that might otherwise get built into markets are reduced. So, I would favor both announcing the tilt immediately after each meeting and releasing the minutes sooner.

CHAIRMAN GREENSPAN. Tom, did you also say you favored releasing the tilt immediately?

MR. HOENIG. Yes, I would be in favor of releasing it promptly after each meeting with the simpler, clearer language.

MR. GUYNN. I think it is important as we continue this discussion to be sure that we all have the same objectives. In my view, the first and foremost objective is to make our intent clear. I think the staff does a really nice job on page 2 of their memo where they express their sense of what we mean by the tilt, namely that it reflects the Committee's thinking about the balance of risks. That is my current understanding of the primary reason for the tilt language. I believe the secondary intent is to continue the practice of giving the Chairman the authority to act for the Committee in extraordinary circumstances. I assume those are the two things we are trying to accomplish.

I do not think that announcing the tilt would have a negative effect on the Committee's discussion, although that is an issue raised in the staff memo. In fact, I would argue that it might even strengthen the discussion in that those who favored action at a meeting when none was taken would at least have the benefit of the tilt being announced immediately, with whatever effect that might have on the market. I also am satisfied that Fed watchers and others who pay attention to the tilt are smart enough to realize that circumstances may change as events unfold after a meeting. Thus, they will not expect our next action always to be in the direction of a tilt.

I also share Tom Hoenig's view on releasing the minutes. I assume that we should be able to publish the minutes sooner than a few days before the next meeting as suggested in the staff memo. Since the minutes elaborate on the reasoning behind the tilt, I think the sooner we release them, the better we are served. I also share Tom's preference for simpler language on the tilt, and I would incorporate the simpler language in the staff memo with the changes that Tom suggested. I also would reword the lead sentence to indicate that the Committee seeks conditions in reserve markets that are consistent with its mandate to foster longer-run price stability and sustained economic growth.

Finally, I wonder whether we should consider dropping the last sentence of the operating paragraph, which references growth in M2 and M3. That sentence may suggest that the Committee has those aggregates as a policy objective, and I question whether it is relevant in terms of the way we currently conduct policy. However, this may be an issue that we don't want to open at this time.

CHAIRMAN GREENSPAN. As a central bank, we should at least recognize that M2 and M3 exist, no matter what we do with them. [Laughter]

MR. GUYNN. I accept that! Thank you, Mr. Chairman.

CHAIRMAN GREENSPAN. President Minehan.

MS. MINEHAN. I am very much in agreement with Presidents Hoenig and Guynn. I favor Option 1, prompt release after a meeting, and simpler language. I, too, tried to draft language that would underscore the concept of risk to which both Tom and Jack seemed to be referring. I also believe that the minutes should be released sooner than 2 or 3 days before the next meeting, if that is at all possible.

CHAIRMAN GREENSPAN. President Parry.

MR. PARRY. I basically support what the three Presidents who preceded me said about making a prompt announcement, and I would release the operational paragraph when we change the tilt. I have to say that I find the language in Option 2 relating to the tilt to be somewhat preferable to that in Option 1, though both certainly are better than what we have today. Option 2, it seems to me, captures the essential element of asymmetry in that it refers to the likelihood that we will move policy in one direction rather than the other, and I think that is highly desirable. What I like about Option 1 is the reference to the long-run goals. So, some combination of Options 1 and 2 would be my preference.

CHAIRMAN GREENSPAN. President McTeer.

MR. MCTEER. Just to play devil's advocate, I would like to suggest that we'd be better off not formally voting on a tilt. Therefore, we wouldn't have the decision to make on how to release that vote. I understand that having the tilt as an option may help with consensus building and arriving at a decision during any given meeting, but we can get the sense of where we as a group are leaning without necessarily voting on it. We would run fewer risks of creating embarrassing situations where we were getting ready to zig but had said at the previous meeting that we were more likely to zag. I think there would be a greater degree of freedom for the Committee if we did not have a formal tilt but just listened to each other and knew which way we were leaning without having to take a vote.

CHAIRMAN GREENSPAN. Governor Rivlin.

MS. RIVLIN. I agree with Option 1 as amended by Tom Hoenig. I thought the staff draft was a quite good breakthrough in terms of added clarity and straightforwardness, and Tom has made it a bit better. I suspect that what will happen if we know we are announcing the tilt is that we will be less likely to have one. We may, if there is a considerable degree of uncertainty, take refuge in a no tilt directive, but that seems appropriate to me. The only reason for having a tilt is that we want to send a signal about which way we are leaning. When we are sure enough of that signal, we ought to say so. We don't need to signal ourselves; we need to signal somebody else. So, it should be a public matter. I also think it would be desirable to get the minutes out sooner if we could. But the important breakthrough is straightforward language on the tilt and announcing it immediately.

CHAIRMAN GREENSPAN. Governor Meyer.

MR. MEYER. I continue to favor immediate announcement of the tilt. I thought Tom Hoenig and Jack Guynn presented the arguments extremely well, and I believe Tom improved the draft language a little. I recognize that there is some danger that an immediate announcement could reduce the use of the tilt. However, if we are disciplined, we can avoid that and honestly communicate to the public exactly how we assess the risks going forward. That is what the tilt does. Releasing the minutes more quickly would be a further constructive step toward incremental transparency, and I think doing that would be a good idea.

CHAIRMAN GREENSPAN. President Broaddus.

MR. BROADDUS. Mr. Chairman, I continue to believe that the more information and the clearer the information, the better. So, I agree with the majority here. I like the language of Option 1, and I think Tom Hoenig has improved it. With Tom's changes, that option strikes me as a huge improvement over what we have now. I would release the directive immediately and release the minutes as early as possible.

CHAIRMAN GREENSPAN. President Boehne.

MR. BOEHNE. I agree with the simpler language. I, too, think that Tom has improved it, and I would go with that. While I realize that it's difficult to be against providing more information, I continue to have some problems with immediate release of the tilt. I am for more information as a general matter, but I believe the practical outcome of prompt release of our decision on the tilt would be less use of it. Monetary policy does not take place in a vacuum. It takes place in a wider social and political environment. In that environment, it is almost always easier to lower interest rates than it is to raise them. If we are planning to raise interest rates, we may as well get a real bang for the buck and actually do it. If we say we might raise them and then fail to do so, we are going to get the inevitable announcement effect and the associated criticism for doing it. There will be a further "announcement" effect later when nothing happens. I think we will go through that exercise a few times and conclude that it really is not worth doing. Not acting in the direction of a tilt may also erode our credibility. The tilt may be useful for our internal deliberations, but we would be using it less and adopting symmetric directives more frequently. So, I have real doubts that this kind of disclosure would actually contribute to clarity. And I therefore have misgivings about moving in the direction where the majority opinion appears to be going.

CHAIRMAN GREENSPAN. President Stern.

MR. STERN. Thank you, Mr. Chairman. I certainly favor earlier release of the minutes and clarifying the language with regard to the tilt or the lack thereof. Like Bob Parry, I have a mild preference for something like Option 2, but there doesn't seem to be a huge difference between the two versions as I read them.

I share Ed Boehne's reservations about the immediate release of the decision on the tilt. Historically, it seems to me that it has been a very noisy signal because we frequently have had a tilt or changed the tilt and nothing followed. That gives me some pause. I'm not sure we are going to have the intended results from that kind of release, at least at this point in time. So, I'm not in favor of immediate release at least for now, and I would prefer to hold off making a decision.

CHAIRMAN GREENSPAN. Governor Ferguson.

MR. FERGUSON. I am with what seems to be the growing majority here, but I recognize that there are counter arguments. I'm in favor of immediately releasing the tilt mainly because it's a question of honesty. If a consensus has emerged in the Committee that says the risks have moved in a certain direction and therefore policy may follow, I think it is useful to inform the market. We are now in a posture where we do not release the tilt and we end up having a number of people trying to interpret our speeches and our responses to questions in a way that may not conform with our thinking. I think releasing the tilt promptly will give us a chance to be much clearer with the market, to signal with one voice as opposed to potentially 19 voices, and to be certain that if we have reached a consensus, we will tell the market what the consensus is.

I also would be happy to encourage the earlier release of the minutes in the sense that they provide a fuller context for our decisions. As to the language, I have a slight preference for Option 1 as amended by Tom Hoenig, but I can support Option 2 as well.

CHAIRMAN GREENSPAN. President Poole.

MR. POOLE. I, too, like Option 1, but I would prefer the tilt language from Option 2. I think that the earliest possible release of the minutes, consistent with their being written clearly and informatively, is a good idea. I would like to add that I cannot imagine a better time to introduce these new procedures than right now, given the other things that are going on.

CHAIRMAN GREENSPAN. Governor Gramlich.

MR. GRAMLICH. Thank you, Mr. Chairman. First, I am for releasing the tilt sentence or the entire directive paragraph promptly after the meeting and the minutes as soon as possible thereafter. On the language of the directive paragraph, I am for Option 1. Let me point out one difference between Option 1 and Option 2; Option 1 states the Committee's goals in the first sentence and goes on to say what the Committee did; Option 2 reverses that order. However we describe the tilt, I would like to preserve that aspect of Option 1. That is, I would state the goals first and then indicate what we did.

I agree with Bill Poole that we should adopt these changes today, although they may make us a little less aggressive about changing the directive language. I agree with what Tom Hoenig said, but unlike Bob McTeer, I would like to retain the tilt in the directive. One thing I have been worried about, and I have said so in the past, is that the way we make policy could allow us to get too rigid on the federal funds rate. If we keep the tilt, we can be a little less rigid, and I would like to retain it for that reason.

On a last point regarding our credibility that Ed Boehne made and Gary Stern seconded, I have been impressed since I have been here at how short people's memories are. Six weeks is a fairly long interval in terms of monetary events, and there is a great deal of speculation about what we are going to do today and not too much is remembered about where we were six weeks ago. I'm not too worried about the credibility issue because if we change our position or change our minds I think that would be viewed in the context of whether it is a good thing to do in light of the most recent events. I don't think we would lose any credibility. So, I am inclined to downplay that argument.

CHAIRMAN GREENSPAN. Vice Chair.

VICE CHAIRMAN MCDONOUGH. Mr. Chairman, I think it might be worth thinking about why we do what we do before we change it. One of the realities is that by releasing the minutes of a meeting two days after the following meeting, the decision on the tilt at the earlier meeting may be interesting but it is no longer very important. We already have decided either to ease or not to ease or to tighten or not to tighten at the meeting that took place two days before. Why have we thought that use of the tilt has served our cause well? In my view it has helped us to focus on what we want to do in terms of guiding our policy between one meeting and the next or at least in terms of a longer-term view of where we are headed. I think that has served us very well.

If we decide to release the minutes earlier, which in and of itself is probably a good idea, my analysis of the collective psychology of this group is that in fact, as Alice Rivlin suggested, we will not do a whole lot of "tilting." The reason is that if we are going to announce the tilt either right away or shortly before the next meeting by releasing the minutes early, we will create a difficult conundrum for this central bank. Central bankers are supposed to be believers in price stability. Even if we are symmetric in our approach to inflation, as I think many of us are, in the sense that we are opposed to both inflation and deflation, the public believes that central bankers are supposed to be inflation fighters. We have to remind them every now and then that we are against deflation also. I can envision us sitting around this table saying that we ought to have a directive that is biased toward tightening, and some of us would then say that we ought to go ahead and tighten. But if we do not want to tighten at a meeting, then it would be better not to announce after the meeting that we are thinking about doing it later. Doing the latter would in my view make us look a little questionable in our judgment or at least in our strength of character. On the other hand, if we are thinking of easing but are not sure we want to ease at a given meeting, people would conclude that that is a rather reasonable thing for central bankers to be doing. So, with an early announcement we would wind up in my view of the real world more likely to tilt toward easing and less likely to tilt toward firming.

Even though I believe that it would be a good idea in principle to release the minutes early, and therefore I don't feel very strongly about whether we announce the tilt or the absence of a tilt shortly after a meeting, I think it is likely that with such an announcement the use of a tilt would become a fairly rare phenomenon. Most of the time when we think that economic conditions, the financial markets, and monetary conditions are such that it might be appropriate to ease monetary policy at some point, we as good central bankers might not be entirely sure of the need for easing quite yet, so we would not do it. Therefore, I'm not sure what we would accomplish by changing our procedures.

To summarize, prompt announcements make us look like believers in transparency; that is good. They make us look like we are sharing information with the American people; that is good. But in terms of actually serving the interests of the American people well--and I think we have been doing a phenomenally good job in that regard, leaving collective modesty aside--I am not sure that a change in our announcement procedures would improve our performance.

CHAIRMAN GREENSPAN. President Moskow.

MR. MOSKOW. Mr. Chairman, I tend to agree with President Boehne and also President McDonough. It is hard to argue against transparency. Obviously, we all want to release as much information as possible. But if we were to design this system from the start, I cannot imagine that we would design a system that would require us to make two decisions. One might be a decision to maintain an unchanged policy and the other a decision on whether we want to tell the world we might be tightening or easing later. Alternatively, we might take an action and announce shortly after the meeting whether our directive includes either of those two tilts. It just does not seem logical to me that as a central bank we would want to do that. We have used the tilt for other purposes, and now we are trying to design some system around that history. We wouldn't design it this way if we were to start afresh and didn't have to take account of its use in the past.

I believe that if we were to agree to announce the tilt at some time before the next meeting, the practical result would be that we would use it much less. Actually, though, the existing system seems to be working rather well. We had unusual circumstances at the August meeting when we changed to a symmetric directive. The July minutes, released shortly after that meeting, indicated that we had had an upward bias. In the interim, between the August meeting and the September meeting, the Chairman consulted with us at Jackson Hole, and he subsequently announced that the directive no longer had an upward bias. So, I think that, on the whole, our system for announcing our decisions has worked rather well over the years and I do not see any need to change it at this point.

CHAIRMAN GREENSPAN. President Jordan.

MR. JORDAN. Thank you. With regard to the minutes, I agree with releasing them as soon they can be prepared, even though releasing them sooner will impose some burden on the staff and on all of us who review and approve them.

On the release of the tilt, though, I am persuaded by a number of comments today that if we release it immediately, we will not use it. Therefore, I want to release the tilt immediately! [Laughter] I am persuaded that over time the costs of having a tilt outweigh its benefits in terms of consensus building. I have always thought that if we have monetary policy that operates on a price basis, we run into problems in terms of interactions in the marketplace if we announce our intention to change interest rates in a certain direction over time. The markets do move on that kind of information, as opposed to the way they tend to function if we have a quantitative approach to implementing policy.

With regard to the wording of the options, like Bob Parry and Ned Gramlich, I like the way Option 1 begins with a statement of our objectives. Regarding the tilt sentence, though, I do not like Option 1 because it states that "the Committee believes that developments are more likely to warrant....etc." That immediately starts to raise questions about what developments are involved or what indicators flashing red, yellow, or green will trigger an action. It puts undue weight on some signal that may lead to a change in policy. Option 2 does not do that.

I agree with Governor Gramlich's comment that the federal funds rate has tended to be too rigid, but my sense has been that the tilt frequently has been used in lieu of making a policy change. The tilt may serve a function in terms of building a consensus, but if it were not available, we would have more straight up or down votes. We would change our policy or we would not.

CHAIRMAN GREENSPAN. Governor Kelley.

MR. KELLEY. Mr. Chairman, when we discussed this issue earlier, I spoke at some length against the idea of early release and I still feel the same. I would like to restate my views briefly, if I may, even though most of my concerns already have been expressed. First of all, please recall that the Lindsey paper that supported our earlier discussion showed that over the past 12 years, the tilt in place at the time of each FOMC decision was in the same direction as the decision itself only 52.7 percent of the time. In the other 47.3 percent of the time, the decision differed from the existing tilt. Thus, the tilt has been nearly perfectly worthless as a predictor of policy decisions. [Laughter]

In my view, this and other problems give us three reasons not to change our announcement practices, and they provide me with a notion of what the results would be if we did. First, this record shows that an early release over the past decade would frequently have misled the general public, which is only concerned with deeds and not the fine nuances of economic reasoning. As a consequence, I am convinced that with early release we would experience a severe loss of credibility that is the lifeblood of our policy's effectiveness. Second, early release of an asymmetry would often be the equivalent of a policy move that the Committee had just decided not to take, and the Committee could never know as it voted what forces it might inadvertently be setting in motion an hour or so later when the announcement was made. Third, if an asymmetry were in place at a meeting where the issues were close, the very existence of a publicly known 6- to 8-week old position could influence the adoption of a less than optimal new policy.

As a consequence of all this, I am confident that, after being burned a couple of times, the Committee would simply cease to employ this very useful convention. That would be a shame because the tilt legitimizes the uncertainty that is frequently present and the delay that is frequently appropriate, and it also aids materially in building a consensus. In sum, I can see no helpful elements to an early release regimen and many serious negative consequences.

On the rewording of the directive, truth to tell I like the existing language and I would be a little sad to see it go. Everyone who is interested and needs to know understands it perfectly well, and more importantly it constitutes a bit of quaint Americana that we should cherish. [Laughter] That said, I would support a change if that is the Committee's wish, and either of the two wording options and the suggested amendments are perfectly acceptable to me. Option 1 is fine, but I think there is much to be said for Option 2 because of its greater continuity with the present practice. Thank you.

CHAIRMAN GREENSPAN. One of the things that strikes me about this discussion, and I must admit that I am on both sides of this issue, is that I switch back and forth to different sides at different times. The reason is that we are being pressed on something that we consider to be of value to the market, namely that more information is better than less. There also is an ethical issue here, one relating to the integrity of this institution, that clearly is an important issue that we need to address. Both of those considerations suggest that more is better, although we must remember that we are not going all the way in providing information. If we went to the fullest extent in that direction, then Henry Gonzalez's approach of live transmission of this meeting obviously would be the most ethical and most directly available source of information to the market, but it also would be the most useless. So, let us be careful about how we weigh the various alternatives.

The one thing that struck me, which has not surfaced in our discussion today, is that our experience of the last several years has not been the same as our experience over a much longer time frame. That is, the nature of our deliberations and the way we conduct monetary policy are quite different when the economy is under extreme stress, when the unemployment rate is rising, when there is a cacophony of outside comments about the need to lower interest rates-- the sort of commentary we seldom get when the economy is strong. So, we have to be a little cautious about proceeding further without availing ourselves of the lessons of past experience with regard to how things may play out in a period, say, when the economy is getting away from us on the downside and we are looking at a fairly dramatic decline in demand, rising unemployment, and a lot of political stirring. I think it would be important for us to work through a number of alternative scenarios in that context. If we do that, I think we're going to find that this issue is a lot more problematical than it may currently appear. I think we ought to do that. What our discussion did clarify, unless I misheard, was a general willingness to abandon quaint Americanism--

SEVERAL. Americana.

MR. KELLEY. Americana.

CHAIRMAN GREENSPAN. There does seem to be a fairly broad consensus about the desirability of better and simpler language. However, we have not yet come together on some of the other issues; if a vote were taken on those issues, I think there would be a majority in favor of doing something now, but there is still a significant minority on the other side. With regard to the wording of the directive, this is the first time that I have sensed the existence of general agreement though there remain some small differences. I would recommend that we put together language that reflects, as best we can judge, the consensus of this group and revisit this matter at a later meeting. We can then make a change, and I think we will be ready to do so in part because we have wrestled with this issue for a long period of time.

There are two quite different disclosure issues. One is that of giving changes in the tilt the same status as changes in the funds rate with respect to when they are announced. The second, which as I see it may be viewed as independent of the first, is when to publish the minutes. I have a certain sympathy for the views of the Vice Chair on the latter. I often have wondered what we would gain by releasing the minutes a week earlier than the current schedule if the information on the tilt was already out. I grant that if the tilt is not announced shortly after the meeting, then moving up the publication of the minutes clearly has the effect of releasing the tilt at that point. But if the tilt is already published, then the acceleration of the minutes strikes me as something that probably has more potential for mischief than not. Remember that the minutes provide a discussion of the various forces and nuances and the like, and if we were to decide to publish them one week earlier, then why not two or three weeks earlier? There has been general agreement within the Committee that the contingency discussions contained in the minutes should be published only after those contingencies no longer have relevance. So, I do think that the issues of whether we publish the tilt at the point of decisionmaking and when we release the minutes are separable. They are not necessarily tied.

Unless I hear an objection, what I would like to do is to have Don Kohn construct a specific, formal proposal based on today's discussion of the various wording options and Tom Hoenig's amendment. I believe we can come to an agreement at our next meeting on that issue. However, I do think we should continue our discussion relating to more prompt disclosures to see if we can narrow our differences further. We have narrowed them to some extent. In that regard, I would like to suggest that the staff review how, as they see it, changes in our practices would play out in periods other than when we make decisions only at meetings and are getting very little outside criticism. We have been in such a period for quite a while. In fact, it is almost unprecedented because we tend to be the favorite scapegoats of a significant number of people who live inside the Beltway. The fact that we have not been the subject of heavy criticism for a prolonged period is quite unusual and may limit our ability to anticipate what we could face in the down phase of a business cycle if we change our disclosure practices. I think it is essential for us to make certain that if we decide to move toward earlier release--a decision that as I said earlier would effectively be irreversible--we will have thought through how things would play out and what the implications are. Unless there is an objection, I will close the discussion on this issue at this point. Hearing none, let us go on to Peter Fisher.

MR. FISHER. Thank you, Mr. Chairman. I will be referring to the usual package of colored charts with an FOMC cover and also to three pages of black and white charts showing standard deviation data that I will refer to briefly. Those two sets of charts should be in front of you. 1/

Looking at the first page of 3-month deposit rates--the current 3-month, the 3-month forward, and the 9-month forward--you can see that the 9-month forward 3-month rate is now trading at a level of about 4.7 percent, reflecting in my judgment a market expectation and pricing not of a single easing of monetary policy but of a whole series of easings through early next year. You can see that these expectations began building after the Committee's last meeting and the contemporaneous Russian devaluation and moratorium. They have become much more pronounced in recent weeks.

In contrast, the forward rates in Germany and Japan have now collapsed onto the current 3-month deposit rate, so there is no expectation of up or down rate movements in those two countries, just sideways. I always like to point to instances when movements in exchange rates are consistent with changes in short-run interest rate differentials. I do not want to suggest that the changes in the rate differentials were the only cause of the dollar's slight weakening, but it is gratifying when we find consistency there.

At your last meeting, I suggested that market participants were on the edge of their chairs with respect to the risk of a Chinese devaluation of the yuan. It turns out that the Russian devaluation and moratorium of the prior

1/ Copies of the charts used by Mr. Fisher are appended to the transcript. (See Appendix) day was sufficient to strain, and in some cases nearly to shatter, investor confidence around the world, particularly in fixed income markets.

Turning to the second page, we have depicted a series of yields on fixed income instruments. Let me work up from the bottom of the page. At the bottom, we have the 10-year Treasury note and a Merrill Lynch high grade agency index in yield terms. The dark blue line above the red line is the 10-year U.S. swap rate, that is, the fixed component of the "plain vanilla" 10-year fixed rate to floating rate interest rate swap. The lighter blue line is the Ford Motor Company's 10-year bond and there is a Fannie Mae coupon issue as well.

Moving up the page, the middle panel is on the same scale as the bottom panel. We are looking at a jump of 150 basis points to get up to this Merrill Lynch index of high yield securities. That index covers more than 900 companies rated BBB or lower.

The top panel is on a completely different scale in order to fit the JP Morgan emerging market fixed-income index on the same page. One reason for presenting this in this form, which I will come back to in a moment, is that a widely emulated trade in the financial markets has been a spread trade. It is based on an expectation that spreads would be narrowing between higher yielding credits and, for example, Treasuries. You can see here that spreads between the higher yielding issues in the top two graphs and the Treasuries widened considerably after the Russian devaluation on the day before the Committee's meeting in August. While some of the yields on higher grade credits are lower in absolute terms, the spreads themselves also have been widening. So, trades constructed even against those credits have been under considerable stress despite the fact that their yields in absolute terms have shifted lower.

The rush out of emerging market and higher yielding instruments in late August obviously put significant strain not just on those who are carrying higher yielding instruments but on those involved in trading on spreads. The result has been an acceleration both of purchases of Treasuries and sales of higher yield securities. It is worth noting that while the yields on higher grade credits have come down, at least part of the explanation is an expectation in the market that there will not be the normal pace of new issuance. In these very volatile markets, firms that have higher grade credit ratings like the Ford Motor Company are not going to try to price new issues, so some of the reduction in yield is in anticipation of that supply effect. Of course, the treasurer of Ford Motor Company is not complaining that yields on Ford's bonds are lower, but he does face more volatile markets. The 900 or so companies represented in the Merrill Lynch master index of high yield securities, however, are facing both higher yields and an inability to borrow in these very volatile markets.

Turning to the next page, we see another way of looking at similar data. In the top panel, we have the 10-year swap spreads that I referred to earlier. The panel shows the 10-year fixed leg of a fixed-floating swap against the government bond for the same country--France, Germany, the United Kingdom, and the United States are shown. You can see the tremendous widening of these spreads after the Committee's last meeting.

The bottom panel, unfortunately, is poorly labeled; it should be called "swap-spread spreads." What is depicted here is the difference between the U.K. swap spread and the French swap spread in blue and between the U.K. swap spread and the German swap spread in yellow. This is a trade that is based on what a number of people have expected to occur--the long-run convergence of the United Kingdom into the EMU. Eventually that is going to happen and this is one way to take advantage of that expected event. Instead of converging, however, you can see that the spreads have tripled since late August.

Yet another way of looking at the same data is reflected in the black and white charts that I have handed out. The point here is that the events that have occurred recently in fixed-income markets produced a shock not just for those who have been trading for the last year or two but also for those whose trading goes back as far as June 1992. What we are looking at here is the standard deviation in basis points of these spreads, as measured over 20-day intervals, from the mean for that interval. This chart indicates how many basis points need to be encompassed to include one standard deviation. For the U.K. 10-year swap spread, the average 20-day standard deviation from June 1992 through July 31 of this year was 2.6 basis points. As you can see, the prior high for any 20-day period was an average of 9.5 basis points in 1994, while for the 20-day period through the end of August it was 14.8 basis points. So, we had a huge explosion in the volatility of the swap spreads in August. The same essentially can be seen on the second page for the U.S.10-year swap spread.

CHAIRMAN GREENSPAN. This is the U.K. bank rate versus sterling?

MR. FISHER. Yes.

CHAIRMAN GREENSPAN. What maturity?

MR. FISHER. The 10-year maturity. So, we have a 10-year gilt. It is a 10-year swap among the prime bank names, not necessarily British banks; it involves the major players in all the markets.

CHAIRMAN GREENSPAN. But in sterling?

MR. FISHER. Yes, in sterling. It is that spread we are looking at as it widens out and becomes more volatile. I don't need to go through all the data, but you can see essentially the same for the U.S. 10-year spread and the JP Morgan emerging market bond index. My point is to underscore that the shock to fixed-income markets that occurred in late August was of considerable significance to the players in the markets and in historical terms.

Turning to the next color page--I will try not to dwell long on this--on the left side, we have re-indexed to May 1 a total return, 10-year bond index in blue for the United States in the top panel, Germany in the middle panel, and Japan in the bottom. In red, we see the local equity index, in each case also re-indexed to May 1. The obvious point here is that bonds have been a better investment over this period than have equities. That may not have required rocket science expertise to figure out! [Laughter]

On the right hand side, we have a measure of volatility. Here the blue line is the At-the-Money implied volatility of options on futures of the 10-year bond contracts and the red line is the At-the-Money implied volatility of options on the equity indices, both indexed back to May 1. So, this is the change in the level of the implied volatilities on the futures contracts. This shows how extraordinarily implied volatility has increased, particularly for equities. Please forgive the lack of JGB data for June and July in the bottom right panel. The point here is in part the extraordinary increase in volatility in the equity markets but also how much money an investor might have lost in late August if the investor had written a lot of option contracts in the expectations that volatilities would be coming down. The loss could have been an extraordinary sum of money.

CHAIRMAN GREENSPAN. Some did!

MR. FISHER. And some did.

Finally, Mr. Chairman, in the chart on the last page relating to our open market operations, you can see that fed funds generally have traded uneventfully since your last meeting. We did purchase $7.9 billion on an outright basis, and we will have to make more such purchases because reserve needs have been growing.

Finally, we had no foreign exchange operations in the period. However, we are working on a number of issues and I would like to mention those. One on which we are working with Board staff is that of opening accounts for the European Central Bank on our books and trying to open a Federal Reserve account on their books. It is not quite clear what, if anything, we can do with our account on their books. We don't know what services they will be offering. But in the spirit of bonhomie and camaraderie, we are looking to open an account with the ECB. There are a number of technical issues for them that are proving to be very time-consuming to work out. With respect to their accounts with the Federal Reserve, they want to maintain a very complex structure of 13 different accounts for the national central banks as well as for the ECB itself and to have it all under one umbrella. We are trying to work that out.

We also are working on a number of technical issues related to the advent of the euro that have to do with our payment facilities and how we operate the accounts. I am opposed, however, to undertaking any planning at this time of changes in the investment of our reserve holdings. I would much rather wait and see how markets develop. There may be some diversification options for the management of our deutschemark reserves, but I think the markets are going to be very uncertain and in any event the operational issues are consuming our time at present.

Our holdings at the BIS, the Bundesbank, and in German government bonds and German repos are in the wholesale markets where they will all be converted and denominated in euros. We would have to resist rather strongly and seek out bankers prepared to help us out if we wished to maintain them technically in deutschemark denominations. We have not been resisting that conversion but have been trying to work with the flow.

Ted Truman and I have sent you a memo on the status of discussions of the swap arrangements, 2/ and we will be happy to answer any questions about those discussions.

Mr. Chairman, as I said, we conducted no foreign exchange operations for the System during the intermeeting period. I will need the Committee's ratification of our domestic operations during the period, but I would be happy to answer any questions about them.

CHAIRMAN GREENSPAN. Peter, I think we are all aware that a major trauma in world financial markets occurred when the Russian devaluation and debt moratorium were announced. Since the size of the Russian economy is de minimis relative to the rest of the world, something fundamentally different was going on.

There are two, not necessarily competing, views as to what occurred. The first is that there was a general sense that the Asian contagion around the world was moving into remission,

2 / A copy of this memorandum, dated September 28, 1998 and entitled "Update on the Federal Reserve Swap Network," has been placed in the Committee's files.

though that was seen as a gradual process. That improvement was perhaps best evidenced by the behavior of the stripped Brady spreads, which were fairly stable for a while. The realization that contagion was still alive and well unwound a whole set of views and expectations that went back a long way, and that shock clearly is capable of explaining the behavior of the financial markets.

The second hypothesis relates to the presumption that in all likelihood there would be a G-7 bailout of Russia, and the implication was that if Russia was bailed out, everybody would be bailed out. The evident failure of that to occur raised the question of whether bailouts are back on the shelf, and the associated market disruption reflected an abrupt reassessment of risks, which is captured in the very rapid changes that you mentioned. Of those two hypotheses, where do you tend to lean or would you consider them not necessarily to be mutually exclusive but part of the explanation for what occurred?

MR. FISHER. I would fall in your third category, and I'm glad you offered that option to me. As you described it, Mr. Chairman, there was some sense of stabilization or calming in late July when extreme movements in the Bradys and other securities seemed to moderate. I think there was a hope at the time that the IMF program for Russia announced at that point was going to tide Russia over. No one thought that program was going to be the last word on Russia, but it was seen as a brief sign that things could be held together. Over-optimism about that may have led some to double up their trades. In any event, when their confidence was lost there resulted, through either of the channels you are suggesting, a bigger balloon to explode or to collapse. That is, some nebulous force in the world of financial contagion was closing in or the official sector did not have an answer. Bailout is an answer, but it is not a plausible one for the whole world, as I think your second alternative was suggesting. It doesn't matter for investors which of the two hypotheses you described is correct; both of them involve an extreme loss of confidence. The market movement itself causes enough losses to concentrate the mind and begin a delevering process. I must say, as a side note to this, that in a meeting in Basle earlier this month, a number of my fellow central bankers discussed with me their view that money does not disappear. I disagreed. When markets delever, money goes away and credit comes in. In the macro sense, one can look at the Japanese money supply; money really is disappearing in Japan. In a shorter-run sense, if the parties financing counterparties take away the financing, borrower balance sheets shrink and in one sense money is disappearing.

CHAIRMAN GREENSPAN. Also, the asset values are essentially a psychological evaluation of expected future earnings. If expectations change in the direction of weaker earnings, wealth declines. It is not a zero sum game.

MR. FISHER. Absolutely.

CHAIRMAN GREENSPAN. Financial intermediaries can create money; they also can "uncreate" money.

MR. FISHER. Financial wealth can be destroyed. Obviously, other people probably have views on this very important question that you raised.

VICE CHAIRMAN MCDONOUGH. May I hazard an observation? I think one lesson the market learned from Russia is that if there was any country the G-7 wanted to keep from going into free fall, it was Russia because of the potential geo-political consequences. I believe there is a general view that Russian behavior at the official level was so awful that it was impossible for the G-7 to keep supporting such a country. That reminded people that even if the G-7 is trying to do something, the host country has to be reasonably responsible in order to allow the effort to go forward, much less to assure success. On top of the other things that you suggested, Mr. Chairman, and that Peter has been discussing, I think this experience was a reminder that even if the G-7 has its act together perfectly, it is limited by the host country's willingness and ability to cooperate.

CHAIRMAN GREENSPAN. That is called sovereignty.

VICE CHAIRMAN MCDONOUGH. Yes.

CHAIRMAN GREENSPAN. President Minehan.

MS. MINEHAN. On the Russian situation, at least as regards people in the First District, I believe their concern related more to the lack of a clear bailout in July, though I think opinions have changed about whether that was a good or a bad thing. Obviously, people have responded to the new stories and the rumors that the last tranche of money that the IMF put into Russia quickly found its way out of Russia. I think they now have a better sense of the wisdom displayed by the IMF in not putting in more money. But as far as the Boston markets were concerned, to whatever extent they played into the general market trend, the trigger was the lack of a Russian bailout, at least as people in our area tell me.

I know money can disappear along the lines that you talked about, but I do wonder about some of these spread trades. Who is on the other side of them? Isn't somebody making money on a bet that spreads will widen instead of narrowing? Do we have any sense of who or where that might be?

MR. FISHER. I think one has to think of that in terms of the issuers or borrowers of debt. That is, the role of the financial sector is to take on the financing requirements of people actually building factories and the like. So, the other side may be those who issued bonds and built factories and did so by borrowing on BBB or worse credit some time ago.

MS. MINEHAN. And they are paying off those loans now?

MR. FISHER. The borrowers made money. They borrowed at a good rate and they built nice factories umpteen months ago. So, as I see it such borrowers involve a fair number of those on the other side of these trades. It is not a zero sum outcome within the financial sector in that sense.

MS. MINEHAN. Some of it may well be.

MR. FISHER. Yes, some people in the financial community undoubtedly are making money on the other side.

MS. MINEHAN. These gains and losses used to be related to trade and now they seem to be associated mostly with speculation.

MR. TRUMAN. They never involved trade! Seriously, Peter did not mention the fact that the Federal Reserve Bank of New York is going to release its turnover survey today. If we go back and look at the first such survey many years ago, we find almost precisely the same low number, namely something like 10 percent or 15 percent of all the financial transactions are traceable to real transactions. The multiplier essentially has been constant over the roughly 20 years that the Bank has been doing that survey. I don't think there has been much change, at least on the foreign exchange side. One can assert that it is a Ponzi game, but I'm not sure it is a bigger Ponzi game than it was 20 years ago.

MR. FISHER. Cathy, clearly there are trades where people on different sides make money.

MS. MINEHAN. Somebody is benefiting from these lower yields.

CHAIRMAN GREENSPAN. I think it's important to understand the degree of grossing up of the nation's balance sheet. That is, a fully consolidated balance sheet of the United States would on the asset side have our gold stock and our net physical property accounts plus net claims against foreigners; on the claims side all we have is equity. Grossing up by including intermediation is a zero sum game. What is not a zero sum is the real assets. If we have inventories of copper on the asset side of the consolidated balance sheet and the price of copper falls, then equity on the right hand side falls. That is not a zero sum game; there has been a real loss. The same is true if we evaluate the physical assets in terms of their market value, essentially the discounted present value of expected future earnings of those physical facilities. That number can change and that will change the equity side. That is not a zero sum game. But all the grossing up by debt intermediation, which is a huge part of total assets and liabilities, is a zero sum game. The only thing that is not is the market losses. But one person's market loss is another person's market gain and that just washes out of the whole system.

MR. FISHER. Yes, I agree with your analysis, though my point to Cathy Minehan was more limited, namely that initially we have to be careful to separate the financial sector from those who borrow. We might call it the real sector for the moment. If we have had years and years of IPOs and junk bond financing, the real sector has already taken its money and invested it somehow. The financial sector is now faced with a collective writedown of the value of that paper as the balloon is pricked. There will not be an offsetting gain within the financial sector for every loss within the financial sector as the air comes out of the balloon.

CHAIRMAN GREENSPAN. We had some $15 trillion in equities issued in the United States, the market value as of say last June, and we have lost $3 or $4 trillion of that value. That is not a zero sum game. It has to appear somewhere as somebody's losses. It may be a reduction in pension fund values or a loss by a bank that has made a loan to somebody who owns those assets. It is going to show up somewhere, and we will not have a clue where that is until we start to see third-quarter results. But I will tell you that it is going to start showing up in places we do not anticipate, and the sense of nonzero sums is going to become very obvious.

MS. MINEHAN. I do not disagree with the nonzero sums. My point is that at some level somebody has benefited from all this.

CHAIRMAN GREENSPAN. Yes, there are a lot of winners.

MS. MINEHAN. The other question I wanted to ask relates to the sharp rise in volatilities. With regard to volatilities in the stock market, we have concluded on the basis of some of the work we have been doing on mutual funds over the last two or three years that until recently volatilities had been lower rather than higher than normal. We may be wrong about that, but I am wondering where we are in terms of some normal level of volatility. I'm sure we are still above such a norm, but are we as far above it as some of the recent volatility charts show?

MR. FISHER. I'm not sure what data you are working with. I gather your study was historical.

MS. MINEHAN. Yes, very long term. Our sense was that until very recently volatilities, in stock markets in particular, had not been what they were, let's say, 10 years ago.

MR. FISHER. On an historical basis, working from the data in my head, I think that is right. I have not compared the July 1 to September 15 period with other periods. What I was showing you was implied volatility on equity and bond futures, which moved up sharply from levels in prior months. Again, I do not know precisely what an historic comparison would show.

MS. MINEHAN. This level of volatility is not necessarily important in terms of its immediate economic consequences, but I wanted to understand what the relationships were.

MR. TRUMAN. My impression of most of the work that has been done on this subject over a long period of time is that volatility has not shown much trend in markets that are well developed. Of course, we may have episodes of high volatility and that is what Peter has pointed out. This is an episode in which we observe an extreme set of withdrawals from a large number of markets. But that does not say anything, it seems to me, about whether we are on a new trend.

MS. MINEHAN. I wasn't making a remark so much about trend as about what we have been observing over the last three or four years in particular.

MR. TRUMAN. These things, it seems to me, give us six years worth of information and they are all off the charts.

MR. FISHER. Dino Kos just gave me a specific reference that helps to illustrate the point. I think the current level of implied volatility is double the historic; that is a very skewed result. The rush to try to hedge in the options market has been making the options market, which people rely on, very thin. So, I was focusing on that. That is a pithy point.

CHAIRMAN GREENSPAN. President Parry.

MR. PARRY. I have a question for Peter Fisher or Don Kohn on a somewhat different issue. The spread between 10-year Treasury bonds and the inflation-indexed bond has narrowed very significantly. I think it has narrowed to a little over 1 percent. That is amazing when we consider that the spread presumably includes the effects of expected inflation and inflation risk. Is that due to a lack of liquidity in the inflation-indexed bond, and if it is, why hasn't the market been selling the 10-year issue and buying the indexed bond in an effort to reestablish a more sensible relationship?

MR. FISHER. Let me first discuss the mechanics. There clearly is a lack of supply in relation to demand, whether it reflects a flight to quality or a closing of the spread trade. I think a number of people in the market are now realizing that they have to shift their basic assumptions about how to think about the Treasury curve relative to other credits. Supply is down, demand is up, and they have to think of the Treasury curve in a different way. As I see it, they started trading the indexed bond against an internal mental benchmark of how the normal 10-year bond has traded over the last five years. The typical trader, I think, has a 5-year moving average of recent experience in mind, if they are senior traders. The junior traders have a 1-year rolling average! [Laughter] Traders started out with a presumption of how to price the inflation-indexed bonds against their notion of a 5-year average of a normal yield curve, and there has been a sudden shift in that norm, a break in behavior because of the heightened demand and reduced supply. I think they're going to have to work that out. Don Kohn may have a more profound answer.

CHAIRMAN GREENSPAN. There is an implicit forecast in that arbitrage of the BLS's CPI over a long-term period. The question is whether we should treat that implicit CPI forecast as a true reflection of the view of the inflation risk in the marketplace, assuming that the CPI is measuring inflation accurately. It is not a supply/demand issue. If I seriously believe that the CPI will average, say, 3 percent over the next 10 years, it would be like shooting fish in a barrel to go buy that particular security with a 10-year maturity because it has an implicit inflation risk of well under 2 percent. What are we to make of that?

MR. PARRY. That was my question!

MR. FISHER. I don't think you should interpret it as a good forecast. I don't think that's what the market is doing. I think the trade you are suggesting is a very good one and might be very profitable for you if you or anyone wants to make it at this moment. [Laughter]

MR. PARRY. When can we do that? After the end of the meeting? [Laughter]

MR. FISHER. The illiquidity of the indexed bonds is notorious. The dealers do not like trading them.

CHAIRMAN GREENSPAN. Peter, it is not a trade! You buy it, and you put it away.

MR. FISHER. I agree with you.

MR. KOHN. I do think that the market has put a greater premium on holding liquid assets in these very uncertain times. We can see that in the spread between Treasury securities and federal agency securities, even the benchmark agency securities, which are extraordinarily liquid. That spread has widened out by 15 basis points. The on-the-run, off-the-run Treasury spreads also have widened out.

CHAIRMAN GREENSPAN. I was about to say that is a good case. This is the extreme form of that.

MR. KOHN. This is an extreme. Peter Fisher and Bob Parry are right in the sense that at least part of that decline in the spread between nominal and real rates and the extraordinarily low level of the spread reflect not so much expected CPIs but the extra premium on holding very liquid, nominal, on-the-run Treasury bonds. That premium has driven those rates below what would be sustainable levels in calmer markets, consistent with expected inflation and expected real interest rates. I do think it is sensible or potentially reasonable to think that at least some of this decline in the spread--and it has been a fairly steep decline of about 1/2 point or more since the middle of August--represents a bit of a markdown of inflation expectations as economies all over the world have weakened and commodity prices have come down. In these circumstances, it would be sensible to have some shift in inflation expectations, even if the whole level looks very low and may be distorted. Our interpretation of this decline was that it reflected the extra premium people were willing to pay for the liquid, nominal Treasuries as well as some drop in inflation expectations. It seems logical.

CHAIRMAN GREENSPAN. Anybody else? Does anybody have any questions or comments on the memorandum on the swap network? If not, would somebody like to move approval of Peter's domestic operations?

VICE CHAIRMAN MCDONOUGH. Move approval, Mr. Chairman.

MS. MINEHAN. Second.

CHAIRMAN GREENSPAN. Thank you, without objection. We now move on to Ted Truman and Dave Stockton.

MR. TRUMAN. What can I say after all the talk and ink that has been spilled on international economic and financial developments since the Committee's August meeting? It occurred to me that the Committee's "central tendency" preference might be that I should shut up and get out of here. My so-called international friends have caused enough trouble, and you do not need any further explanations from me about the consequences of external developments for the U.S. economy.

On the other hand, you may have noticed that our forecast for the external sector of the U.S. economy has weakened further, although it has not changed all that much from the one prepared for the August meeting, before the Russian authorities lost their game of roulette with the domestic and international financial markets and set off a global withdrawal from risk. That may be surprising in light of the aforementioned spilled ink. It is clear that our external forecast would have been different without the change in our assumption about U.S. monetary policy and the calming influence, even before its delivery, of the Chairman's testimony last week.

In brief, four factors have influenced our outlook for net exports in different directions: Recent trade data have strengthened our near-term outlook. Projected slower growth abroad and in the United States reduces both our exports and our imports, but the former is more important than the latter. A slightly weaker dollar tends to strengthen our exports and weaken our imports.

On the first factor, U.S. trade data for June and July were stronger than we had anticipated, leading us to reduce slightly our estimate of the negative contribution of net exports over the four quarters of 1998. In the June data, imports were weaker than we expected; however, this weakness brought the second quarter as a whole more in line with our model estimates. In both June and July data, we were surprised that exports, particularly of machinery, did not fall as much as we had expected. In the Greenbook forecast, we carried some of that strength through into the remaining months of the quarter. However, in light of the August report on shipments of capital goods that was released late last week and suggested weaker-than-expected PDE shipments in that month, we may well have overdone our cautious optimism. On the other hand, there may well be some remaining residual seasonality that will boost fourth-quarter exports that we have not taken into account in our forecast.

Turning to the second factor, our forecast for growth abroad, which was very weak to begin with, has been revised down again--by half a percentage point this year and three quarters of a point next year. This is the major reason why we now are projecting no growth in real exports of goods and services between the second quarter of this year and the fourth quarter of next year, in contrast with the 2¼ percent growth in our previous forecast.

In particular, for Latin America we have reduced growth by 1½ and 2 percentage points this year and next, respectively, in reaction to the reduced access of countries in this region to credit in international capital markets and to interest rates that have been elevated in defense of their currencies. In particular, we have negative growth this year and next in Brazil and Venezuela, negative growth this year in Chile, and negative growth next year in Argentina. We are assuming that Brazil will adopt a program that involves significant fiscal tightening and a depreciation of the Brazilian real with negative short-run effects on Brazilian growth, but our base assumption is that these adjustments will be relatively orderly and will not push the Argentine peso off its peg.

With respect to Asia other than Japan, we have reduced slightly our already very weak outlook. There are a few signs of a bottoming out of economic activity in Korea--ask the U.S. steel industry--and Thailand, but not enough to lead us to alter our basic outlook.

Turning to the industrial countries, we have not altered our basic view of the weak outlook in Japan. We had anticipated the cut that occurred earlier this month in the Bank of Japan's target for the overnight rate. The official release on second-quarter growth suggested that activity was not quite as weak as we expected, largely because of a sharper-than-anticipated decline in real imports. We expect the third quarter to record a fourth consecutive negative quarter, in part because of delays in the implementation of the program of fiscal stimulus. We now anticipate that more of the effects of that program will be felt in 1999.

We have weakened our outlook for the other foreign G-7 countries more significantly in light of the deterioration of global financial conditions, spillovers from Russia, Eastern Europe, and Latin America, and in the case of Euroland, a stronger currency that has affected our outlook for Germany in particular. This deterioration occurs despite significant changes in our assumptions about monetary policies in these economies. In the United Kingdom, we now assume that interest rates will decline by 125 basis points by the end of 1999, to a level 150 basis points lower than we assumed in August. In Canada, interest rates are assumed to decline in line with U.S. rates, but with a longer lag and from the elevated level to which the Bank of Canada pushed them in late August. In Euroland, we assume that short-term rates converge to the current German level by the end of the year and remain there through the end of the forecast period, in contrast to the assumption in the August Greenbook of a rise of 75 basis points over the course of 1999. We have not assumed that the outcome of the German election will affect policy or the economy during the forecast period; it remains to be seen if we will be right.

With respect to monetary policy in Euroland, it is clear that right now euro-area central bankers do not want to lower interest rates below the current German level before the European system of central banks becomes operational on January 4, 1999. However, in considering how attitudes may change going forward, I found it instructive to consider how the outlook for growth in Euroland has changed over the past 12 months. Using our own forecasts for the G-7 members of the Euro area as a proxy, our current forecast for growth over the four quarters of 1998 is lower than we thought it would be a year ago by three tenths in France, four tenths in Germany, and one percentage point in Italy. Moreover, contrary to European protestations that the Asian crisis has had little effect on Europe, our estimate of the contribution of net exports is half a percentage point lower for Italy, 1¼ points lower in Germany, and 2¼ points lower in France. As the Europeans have pointed out, they have had a positive surprise on domestic demand, leading to caution about monetary policy easing in Frankfurt--both at the Bundesbank and at the ECB. Nevertheless, if the euro should appreciate against the dollar by more than the roughly 10 percent that we are projecting from the second quarter of this year to the fourth quarter of next year, we could well see a reduction in interest rates before we see an increase.

With respect to my third factor, U.S. economic activity, the downward revision to U.S. growth, despite our changed assumption about U.S. monetary policy, is the major factor behind our projection of somewhat slower growth of imports of goods and services.

Fourth, the dollar has weakened a bit more than we expected over the intermeeting period, primarily against the major foreign currencies. We expect the dollar to continue to decline on average during the forecast period, reaching roughly the same point by the end of 1999 in terms of our real 29-currency index as we had projected in the August Greenbook. This forecast seems reasonable with respect to the major currencies, given the roughly parallel adjustment in our monetary policy assumptions here and abroad. However, the slightly weaker dollar in the near term tends to strengthen our outlook for exports and weaken our outlook for imports a bit.

The combined influence of these forces on our outlook for real net exports is to weaken it somewhat further, but not by a huge amount. However, the risks over the forecast period as a whole remain skewed to the downside. Moreover, in thinking about Federal Reserve policy in this context, the issue is not simply one of how developments in the rest of the world will affect us. Under current circumstances, the size of the potential linkages from Federal Reserve actions or inactions to the rest of the world and back onto the U.S. economy appears to have been magnified.

Dave Stockton will complete our report.

MR. STOCKTON. The changes in the international environment just sketched out by Ted Truman were important elements in the alterations that we made to the Greenbook forecast. However, as you know, we also have had to contend with the noticeably more negative domestic financial conditions of the past month or so. The stock market has dropped roughly 5 percent over the intermeeting period and, as Peter Fisher noted, volatility has been high. In fixed-income markets, yields on investment grade debt have only edged down, despite the sharp drop in rates on comparable Treasuries, and yields in the junk market have risen steeply. Moreover, our special survey of senior loan officers revealed that large banks have shifted from a somewhat accommodative to a more restrictive posture for business loans in recent weeks. Clearly, there has been a pulling back in financial markets that appears to be part of a reassessment of economic prospects and a repricing of risk.

These developments seem likely to leave an imprint on economic activity in coming quarters, and they would have had a more pronounced effect on the top line of our forecast had we not altered our policy assumptions. After your conference call last week, we decided to abandon our assumption of an unchanged federal funds rate in favor of a decline amounting to about 75 basis points by next spring--an assumption not far from market expectations. By our reckoning, this path for the funds rate will help to limit the shortfall in activity next year and to restore growth to potential in the latter half of 2000, with the unemployment rate flattening out at about 5½ percent--roughly our estimate of the NAIRU.

With activity projected to drop from the 3 to 3½ percent pace of the past couple of years to a rate of about 1 percent in the first half of next year, it's natural to ask, "how do we get there from here?" I should begin this discussion by admitting that there is little in the incoming nonfinancial data that is currently signaling the weakness that we expect to emerge by year-end. Indeed, the information that we have received over the past month left the starting point for this forecast very similar to that of the August Greenbook--which is an economy that continues to show considerable forward momentum, led by strength in domestic final demands.

In that regard, last week's reading on consumer spending for August confirmed our view that, but for a slump in outlays for motor vehicles in response to the GM strike and the end of the coupon incentive programs, the growth of real PCE this quarter would have nearly matched the phenomenal gains of the first half. And by most reports, motor vehicle sales are rebounding smartly as supply constraints ease and manufacturers sweeten incentives. Housing starts, though off a bit in August, remain at an exceptionally high level, with mortgage applications for home purchases and builder attitudes suggesting continued strength over the near term.

In the business sector, the figures on shipments of capital equipment, which we received after the Greenbook was completed, were marginally weaker than we had incorporated in the projection. But the underlying growth in new orders points to reasonably healthy gains in equipment spending in coming months--especially in the high-tech area. And, given the low level of initial claims, businesses apparently are hiring at a brisk pace. All in all, it's still a pretty strong picture.

That said, there are a few straws in the wind that hint at some downshift in the pace of the expansion. Increases in payroll employment in July and August, on net, fell below the gains of the first half, with pronounced weakness evident in the factory sector. That weakness is consistent with industrial production which, excluding motor vehicles, has been flat since May. Reports from purchasing managers, anecdotal information, and the slump in commodity prices seem to be pointing to a continued sluggish manufacturing performance--a view that receives support from the recent declines in weekly steel production. The preliminary reading on consumer sentiment from the Michigan survey for September also slipped some, with households citing the stock market and foreign developments as contributing factors. The Conference Board survey, released this morning, fell to its lowest level this year. At this point, it's simply too early to tell whether these shreds of evidence are just statistical noise or the harbingers of slowing activity.

Clearly, in our projection we see a number of the factors that boosted production earlier in the year acting to restrain activity later this year and in early 1999. One of these is nonauto inventory investment, where we think a further reduction in the pace of accumulation will be necessary to prevent imbalances from developing. The reduced pace of stockbuilding is expected to lop off more than ¾ percentage point from the growth of real GDP in the second half.

But the real action in the forecast follows from the sharp slowdown that we are projecting for private domestic final demands. That slowdown results not only from the waning of positive financial influences that propelled growth previously, but their partial reversal in many cases. With corporate earnings expected to continue sagging in coming quarters, we anticipate that equity prices will decline still further. High and rising equity values no doubt contributed importantly to the six percent annual rate gains in consumption in the first half of this year. Over the next few months, this stimulus should dissipate, and the past and prospective decline in household net worth should begin to cut into spending. Housing starts also received a boost from higher stock prices as well as from a strong job market and declining mortgage interest rates. Although we expect mortgage rates to hover around their recent lows, the drop in stock prices and the slower income and employment growth that we are projecting should turn housing from the considerable plus observed in 1998 to a modest negative in the first half of next year.

We do not anticipate business fixed investment to escape this period unscathed. A less favorable external financing environment, a slowing in cash flow, and diminished sales expectations seem likely to leave a clear mark on investment plans as we move into next year. These forces will be intense in the manufacturing sector, where continued declines in export demand and heightened import competition will slow the desired rate of capacity expansion. Financing difficulties are expected to be notable for office and other commercial construction projects. Although these negatives result in a deceleration of fixed investment from the heady pace of recent years, capital outlays are still expected to outpace growth in real output. Declining relative prices and associated rapid technological changes should continue to provide support for capital spending.

Taken together with the continued drag from the external sector, we expect these influences to hold growth of real GDP to about 1 percent in the first half of next year. Thereafter, the lagged effects of our assumed easing of monetary policy, the slight decline in the real exchange value of the dollar, and the gradual recovery in foreign economies combine to provide some lift to real activity. Abstracting from a few highly speculative wrinkles that we have incorporated to account for possible Year 2000 effects, growth in real GDP increases from about 1¾ percent in the second half of next year to about 2¾ percent in late 2000.

There are, as usual, substantial risks to this forecast. We highlighted in the Greenbook the consequences of alternative scenarios for the stock market and for international developments, largely because we continue to see these areas as posing the greatest risks to the forecast. This morning, I thought I would mention a couple of other risks to the outlook.

On the upside, there simply may be more near-term momentum to the economy than is contemplated by our projection. As I noted earlier, most of the incoming economic indicators have remained upbeat of late. And while we expect the economic news over the next month or so to remain fairly bright, forward indicators will need to show a considerable softening before too long in order to be on track for our first-half slowdown. Given the resilience that the U.S. economy has exhibited in this expansion and, at least until recently, the basically sound fundamentals, household and business spending plans may prove more durable than we have projected. This upside risk would be further amplified if the negative sentiment that has gripped financial markets in recent weeks were to be substantially alleviated by an easing of policy. We don't see that as the best bet, but it is a possibility.

On the downside, there are always risks associated with negotiating a slowdown in aggregate demand of the dimension included in our forecast. Despite the sharp downshift in growth that we are projecting for the first half of next year, this forecast can still be characterized as one in which the economy achieves a "soft landing." By that I mean that in our projection firms, by and large, foresee the softening of demand and adjust production promptly, preventing the imbalances in inventories, in capital equipment, and in workers that have tipped slowdowns into recessions at times in the past.

Finally, I don't have much to add to our Greenbook discussion of the outlook for wages and prices. The inflation projection and its determinants have changed little since the last meeting, and we continue to be on the low side of the consensus. Consumer prices are projected to pick up some next year. After declining sharply this year, both oil and non-oil import prices turn up in 1999, and labor markets will be tight through the middle of 2000. Nevertheless, we believe that there will be some important factors limiting the deterioration in inflation. Weak demand and ample capacity in the factory sector are expected to result in further declines in capacity utilization rates, and that should help keep a lid on goods prices.

In addition, we expect that growth in hourly compensation will soon level out and then drift lower over the projection period. We expect this restraint on nominal pay gains to come from both the supply and the demand sides of the labor market. On the demand side, with profit margins under pressure and the climate inhospitable to price increases, firms are likely to resist outsized pay increases. Moreover, some forms of flexible pay should decelerate. Certainly, bonuses in the financial industry are not heading for a banner year. On the supply side, even though unemployment remains low, a rising jobless rate may trim pay demands if latent worker insecurities resurface. But perhaps most importantly, the drop in inflation this year and the attendant ebbing of inflation expectations are anticipated to help perpetuate the current low-inflation environment.

Mr. Chairman, that completes our presentation.

CHAIRMAN GREENSPAN. Thank you. Questions from my colleagues?

MR. PARRY. I have two questions. Ted, it seems to me that our international assumptions are now fairly close to the worse case scenario that was presented to us last year in terms of the real impact on the economy. Would it make sense to think in terms of a worse case again, and what would be its probability? Do you have any thoughts about where the risks are in terms of such a forecast?

MR. TRUMAN. In preparing for this meeting, I looked back at the work that we did on a worse case scenario late last year. In one sense, we are close to the worse case, but it has taken a different form. The sense in which we are close is essentially in that the total impact on the U.S. economy is commensurate with it. It has taken the form, however, of the deeper recessions and problems in Asia including Japan and no spread to Latin America. We had in our worse case scenario a generalized spread to Latin America. It is a little embarrassing to say so at this time, but this proves the less than reliable nature of forecasting. We had no growth in Asian economies last year in our worse case scenario and also no growth in Latin America. We now have positive growth on average in Latin America and negative growth in the Asian economies. So, we are close to our worse case forecast, but we have a slightly different mix.

I think that outcome also points to the second part of your question about where these foreign economies are heading. I probably should have said this in my oral presentation. Our outlook for Latin America is quite gloomy and is much gloomier than I think anyone will see in other forecasts. That may just be because we did ours three days ago, and most of the others you have seen were done three weeks ago. But as was pointed out in the Greenbook, we made a rather modest adjustment. I always find it easiest to think about current account deficits, at least in terms of our own economy, by calibrating them on the basis of how large an adjustment in the deficit goes with everything else that is happening in the economy. It gives me a shorthand way of assessing how big the impact is on the United States. The answer there is that in our forecast we only cut the current account deficits of Latin America in half from where we had them last year. We are still assuming that the major countries in Latin America can finance $30 billion current account deficits rather than $60 billion deficits. It is easy to envision, especially in light of what has happened in Asia, that the number could be zero or a $30 billion surplus without any stretch of the imagination. I think that will be the next aspect of this.

One other point about Asia is that our 1998 forecasts for China and Singapore are about the same as they were earlier. It is the affected economies in Asia that were much weaker than we had them before. But clearly in Latin America and, I think, in eastern Europe and Russia--which are not as important to our economy as to the economies of Europe as I tried to illustrate in my little story about our forecasts of the G-3 nations within Euroland--there clearly has been a big impact.

The interesting development is our forecast. I did not go back and look at it, but I believe our U.S. forecast for 1998 even now is probably stronger than it was a year ago. Interestingly, our Euroland forecast is slightly weaker than we had it last September. The Euro area has taken a very large hit on the external side. This suggests, I would think, that there is a risk of some substantial cumulation on the downside. Now, we could talk ourselves into being too gloomy about these things.

MR. PARRY. Sure.

MR. TRUMAN. It is useful to think about worse case scenarios, but worse case scenarios do not always come true. Let me just end on that point.

MR. PARRY. I have a question for Dave Stockton. The assumption in the forecast is that the saving rate remains basically constant at one half percent. That seems a little surprising given what happens to the equity market and particularly with the coefficient that you have in terms of net worth. I presume that what is happening is that the weakness in the equity market is being offset by such things as lower interest rates, which stimulate consumption. Would you say that your forecast that the saving rate will not be moving up as a result of the assumed decline in the stock market might be a downside risk to the outlook?

MR. STOCKTON. There is some downside risk there. I think the size of the stock market correction we have in this forecast, taken by itself, would have been expected to boost the saving rate by at least a couple of tenths. I should point out that one of the things that keeps the saving rate down is that we do have some offset coming from lower interest rates, and we do have some offset coming through when income growth slows below its permanent rate. That helps to hold up consumption a little.

MR. PARRY. I see.

MR. STOCKTON. But I think there is some downside risk there as you suggest.

MR. PARRY. Thank you.

CHAIRMAN GREENSPAN. President Stern.

MR. STERN. Thank you. Ted, I would like you to elaborate a little on Brazil and the risks there because I have the sense that at least some in the international financial community are trying to draw a line in the sand with regard to Brazil. Yet, while you said you were expecting the Brazilian real to depreciate, you are expecting that to proceed in an orderly way. Obviously, it is not hard to imagine something much worse happening.

MR. TRUMAN. When we do these forecasts, there is a tendency to be at least slightly conservative. There are so many different scenarios that are possible for Brazil. We took a sort of average of what we felt was a reasonable set of scenarios in which we assumed that the Brazilians basically have three problems: they have a fiscal problem; they have a banking problem; and they have a competitiveness problem. We are assuming that these problems are all somewhat interrelated. If they address the fiscal problem that will be enough to avert a complete loss of confidence. Although the exchange rate may have to give, it may give in a way that either is a discrete devaluation followed by a faster rate of crawl or simply a faster rate of crawl so that by the end of the period, the real will be at a level that by one rule of thumb appears to be sustainable. One indicator suggests that the currency may be 15 percent overvalued. So, the real could get down to an acceptable level without too much of an adjustment.

I'm not sure what you mean by drawing the line in the sand, unless you mean drawing the line in the sand in terms of the exchange rate itself?

MR. STERN. Yes.

MR. TRUMAN. I think that is one of the problems with these situations. Brazil has an election on Sunday, so I don't imagine that the president of Brazil is going to say they are about to devalue. Nor do I think they want to devalue. They actually may be considering a widening of the band. Setting a faster rate of crawl is not as much of a problem as a devaluation. They might want to talk themselves into that, maybe correctly. It did seem likely to us as we prepared our forecast that there would be a devaluation or some adjustment of their exchange rate over the period. But since we did not know when it was going to come, whether it was going to come tomorrow or next week or the week after that or in January, and whether it was going to be discrete or gradual, we put it in as being at the desired level a year from now. We drew a straight line between its pre- and post-devaluation levels so that it did not drift around during the forecast period. I think there are very sizable downside risks. The worse the scenario, the more likely obviously it could have ripple effects not just in Latin America but elsewhere.

CHAIRMAN GREENSPAN. Any further questions?

MR. HOENIG. Ted, I have a question on Europe. Some of the discussions that I have heard in terms of whether Europe should lower its interest rates are that as they move toward convergence, their interest rates are coming down in effect. Do you agree with that?

MR. TRUMAN. Yes, and that has been in our forecast. On that point, we have tended to be somewhat more optimistic all along. That may not have been the case initially when we probably had convergence at a higher level. Fairly early on, however, we had convergence at the relatively low French and German level and the beneficial effects of that on the Euroland economies. I don't want to minimize the actual problems that they have had. There are two groups of countries. Italy, where the actual performance of the economy is not so great, is lowering its interest rates. One could argue that is not so bad, but that gets everyone involved in the fiscal fights that they are having. Then we have the other group of countries that have higher interest rates because they want to pursue tighter monetary policies. The question then is, what about France and Germany? At the moment, there is no reason for them to panic, and I'm not sure that I necessarily would panic. In my view it is a little foolish to say that there is no way one can imagine why they would need to lower interest rates. In some sense, our forecast does have them lowering interest rates. It's just that by not having an increase in interest rates associated with a boom condition in the wake of EMU, we now have them with unchanged interest rates. The rate differential in this forecast in some sense is not that much different than it was in the last forecast.

MR. HOENIG. Thank you.

CHAIRMAN GREENSPAN. Further questions from anyone? Who would like to start the roundtable? President Moskow.

MR. MOSKOW. Thank you, Mr. Chairman. Since our last meeting, economic prospects at home and abroad have changed considerably, yet much of the data that we typically use to gauge the forces at work in our economy have changed only marginally. In some respects, conditions in the Seventh District remain little changed since mid August. Growth in the manufacturing sector has continued to slow though levels of activity remain high. Labor markets are still tight and price pressures remain benign. However, the depth and the breadth of actual and anticipated impacts of international developments in our District economy now seem greater than they did only a few weeks ago. I think it is fair to say that many of my contacts are much more nervous about the future than they were in August. For example, in the manufacturing sector we increasingly hear reports of weakness even among firms with little direct international exposure. The strength that we do see is limited primarily to housing-related industries. Although the Chicago Purchasing Managers' composite index indicates renewed strength in September, we believe this largely reflects a rebound from the GM strike. Furthermore, the report shows little rebound in the September new orders index, pointing to future additional slowing. This index is confidential until 9:00 a.m. tomorrow morning.

District steel manufacturers are being adversely affected by increased U.S. capacity, significantly increased imports, and softening demand in some market segments. A major producer of corrugated boxes reported that demand for boxes from manufacturers has declined significantly in the last several months. Further, several members of our Advisory Council on Agriculture, Labor, and Small Business reported that among some District manufacturers, earnings and new orders had declined, overtime shifts were being cut back, and layoffs were likely if export orders did not recover soon.

In contrast, contacts in the auto industry remain upbeat about U.S. sales prospects. After averaging only 14.1 million units in July and August, light vehicle sales seem to be running at around 14¾ million units in September, with Big Three projections for the fourth quarter around 15 million units. Outside of light vehicles, the retailing picture is somewhat mixed. Michigan retailers surveyed through early to mid-September report no deterioration in current sales or in expectations about sales three months ahead. However, one large national retailer in our District reports that sales of big ticket items have slowed week by week in August and September and that the softening trend in electronics and other durable goods has worsened. Sales of this retailer at stores located in small and mid-sized towns where they face little competition also have softened considerably. Similarly, a large trucking firm in our District reports that shipments to retailers are not as strong as expected for this time of the year. Another weak spot is our ag sector, which continues to be hurt by low commodity prices, large crop yields, and declining export demand. Sales of agricultural equipment have dropped enough to generate plant shutdowns and layoffs at some District plants.

On balance then, I see our District's expansion continuing at a slower pace than I reported in August, though with little easing of the tight labor markets we have had for some time. Competitive pressures still limit the ability of firms to raise prices. Among our business contacts I also see greater uncertainty about the future and some declines in confidence.

Turning to the national economy, at our last meeting I thought that the risks, though close to balanced, remained greater on the upside. Since then, however, virtually all the news has suggested a weakening in the prospects for real economic growth and less risk of a significant increase in inflation. International financial instability has begun to have significant effects on the economies of Latin America, as has just been mentioned, which likely will reduce the demand for our exports even further. The continued decline in U.S. equity prices appears to be showing through to consumer confidence, which threatens growth in consumer spending. Despite the decline in Treasury interest rates, financial turbulence seems to be threatening the access of at least some firms to capital, and that may take much of the steam out of the great burst of investment spending we have had in this expansion.

Our projections do not show as sharp a deceleration in growth as in the Greenbook, but we do see a period of growth somewhat below potential next year. To be sure, with labor markets still very tight, the threat of increased inflation has not disappeared. Indeed, we still expect some pickup in core inflation next year, but the balance of risks has shifted noticeably toward the downside.

CHAIRMAN GREENSPAN. President Parry.

MR. PARRY. Mr. Chairman, solid overall economic growth continued in the Twelfth District in recent months, although the pace slowed from earlier in the year. Between June and August, District payrolls expanded by 2.3 percent at an annual rate, down from the 3 percent pace of the first half of the year. Construction and services as well as finance, insurance, and real estate continued to grow rapidly in recent months. However, the District's manufacturing sector has not fared as well. Reduced export demand and a more general slowdown in high-tech manufacturing have led to a significant weakening overall in manufacturing. District manufacturing employment has contracted slightly so far this year after rising 3.7 percent in 1997. The deceleration in manufacturing has been concentrated in California, with manufacturing employment falling ½ percent so far this year. While many sectors of California's manufacturing have slowed in 1998, producers of high-tech products have been particularly hard hit. However, employment growth in high-tech software and business services remains strong.

Turning to the nation, the outlook for economic activity has deteriorated since we met in August largely because of a continued decline in our stock market and a worsening outlook for growth in the rest of the world. Under the assumptions of an unchanged federal funds rate and no further change in the stock market, we have lowered our forecast for real GDP growth for the remainder of this year and 1999 by ½ percentage point to only 1½ percent. I actually see risks on both sides of this forecast. On the upside, the economy has consistently outperformed most forecasts for the past three years. On the downside, of course, the stock market is still overvalued according to most models. In addition, it is possible that the expected economic performance of the rest of the world could be even worse than we all have been forecasting and, of course, we cannot rule out future shocks in financial markets. Real GDP growth in the neighborhood of our forecast, we believe, would help to ease tight labor markets, and this would reduce the risk of higher inflation in the future. Under our forecast, upward pressures from labor markets would moderate over the next couple of years. Moreover, any pressures from this source most likely would be offset by diminished inflation expectations, the higher dollar, ample industrial capacity, falling commodity prices, somewhat higher trend productivity growth, and negative speed effects as the economy slows. As a consequence, our forecast shows inflation as measured by the core CPI falling from 2¼ percent this year to about 2 percent in 1999, and then going below 2 percent in 2000. Overall, since we met in August the risks of higher inflation have receded, while the downside risks for the real economy have increased noticeably.

CHAIRMAN GREENSPAN. President Minehan.

MS. MINEHAN. Thank you, Mr. Chairman. Not a lot has changed in New England during the intermeeting period. The regional economy continues to expand nicely, with respectable job growth vis-à-vis the nation's and very low unemployment rates. Labor markets remain very tight despite August job losses in three of our states and anecdotes abound about the difficulty of finding qualified workers even at the entry level. However, signs of potential weakness have grown as well. Manufacturing jobs declined in four out of the last five months, though there has been some small year-over-year growth in this job category in contrast to the nation as a whole. Regional merchandise exports declined in the second quarter, though not as steeply as in the first quarter. The largest falloff occurred in exports to South Korea. Exports to Japan, Taiwan, and Singapore were also below year-ago levels as were exports to the United Kingdom and the Netherlands, but exports from our region to France and Germany were considerably higher.

Uncertainty about the future is greater than earlier this year. Manufacturers see problems now and in the near future while retailers are less concerned about the near term but see downside risks six months off. Volatility in the financial markets has affected regional commercial real estate trends. The greater Boston commercial real estate market remains strong, with rents of about $30 per square foot, adding together markets inside the city and suburban markets closely related to Boston. However, downtown Class A space is now priced above $40 a square foot and vacancy rates are below 4 percent. But as REIT financing has moved from equity to debt markets, as investors have demanded higher yields on paper backed by commercial real estate, and as banks have tightened lending standards, new and existing real estate deals have come under increased pressure. In greater Boston and some areas of Connecticut, about half of 20 recent office building deals are being renegotiated. Financing has not totally dried up, but it has become more expensive as lenders raise their rates to match the demand for increased yields in bond and syndication markets.

Since the period of market volatility in mid-August, I have been regularly canvassing the CEOs of the region's major banks, one of our insurance companies, and a major mutual fund to determine first-hand how they see their own business risks and the risks facing markets more generally. These conversations have served to underline three themes that seem interesting to me. First, despite worldwide market volatility, flight to quality, and disclosures of losses, settlements in global markets have been largely unaffected. The CEO of one major global custodian, which settles in more than 50 countries daily, indicated that he believes the changes in settlement practices brought about by the events of October 1987 have enabled markets around the world to withstand this period of instability, at least so far. The only problem that his firm has experienced is related to settlements involving Malaysian securities. With the imposition of currency controls in Malaysia, there were distinctions drawn between residents and nonresidents. Those have prompted the introduction of rather complicated administrative measures. But that is something his firm is well capable of handling.

Second, the CEO of the region's one major global bank commented on the recent widening of spreads and what he sees as a rather significant drying up of liquidity in all markets, the same phenomenon we have seen in our tables and charts on spreads. In that bank's view, the widening of spreads has been exacerbated at least to some extent by some of the supervisory letters on credit standards. Those letters have been interpreted as a warning about REITs or cautioning about REITs and what the bank sees as an unexplained downgrading by the OCC of shared national credits. Finally, the bank is especially concerned about market turmoil in Brazil and Latin America more generally. This bank traditionally has benefited from a flight to quality during periods of financial turmoil in Latin America and regards their own positions as more or less devaluation proof, but their concerns are heightened nonetheless.

Finally, while all those contacted believe the current market retrenchment is overdone, they also believe that spreads were far too narrow previously. So, in some sense they regard the financial market conditions as in part a return to more normal spreads in the markets, though there clearly is a concern that the attendant deleveraging will have a near-term contractionary effect. Those organizations that are publicly held have seen a sharp deterioration in the value of their stocks in the market, though they admit that the four to five times earnings reflected in previous market valuations probably was a bit high. Moreover, institutions that have a track record of growing by acquisition see a time of potential opportunity, with the prices of smaller banking and financial institutions becoming more realistic. Clearly, even the ill winds of global financial insecurity may blow some good fortune to those who are positioned to recognize it.

On the national scene, we have little to quarrel with in the Greenbook's forecast for 1998 and early 1999. However, we and other forecasters are not as pessimistic as the Greenbook about the full year 1999. We see a bit higher growth, lower unemployment, and a small pickup in inflation even without the easing of monetary policy embodied in the Greenbook forecast. These differences result from several factors. We have not built in a further drop in stock market prices from current levels. Our estimate of the economy's potential is somewhat lower, resulting in more pressure from tight labor markets. Our assessment is that given profit pressures, wage increases will begin to show through more directly into prices. However, this estimate is fraught with risk, and I must say that we are very humble about our ability to forecast inflation trends in particular. I am not at all sure that we fully accounted for either the contractionary effects of the current credit squeeze or the feedback effects of low inflation on future prices. Also, I must admit to finding the pessimistic international scenario at the end of the Greenbook more reflective of my personal assessment of a likely external outcome. Thus, I think the risk to the Bank's forecast and possibly to the Greenbook's as well is decidedly on the downside despite relatively upbeat domestic conditions currently.

CHAIRMAN GREENSPAN. President McTeer.

MR. MCTEER. The Eleventh District economy continues to perform at a healthy level, although it is retreating from the strong growth we saw earlier in the year. District employment picked up slightly in the first two months of the third quarter after a weak second quarter. The pickup is masking a tale of two economies: a strong service sector and a softening goods sector.

Southeast Asia effects continue to accumulate, especially in the energy and semiconductor industries. Low oil and product prices are harming the energy industry. Lower demand from Asia has worsened the excess supply problems in the oil market, keeping prices below $15 per barrel for much of the summer. Drilling has declined dramatically, especially for oil. Our directors report that wells are being shut in and rigs stacked. Not many new pickup trucks are being bought in West Texas these days! We haven't seen too many layoffs yet because companies are reluctant to part with the skilled workers they worked hard to recruit in a very tight labor market. However, if oil prices stay at or below $15 too long, we will begin to see the layoffs accelerating. Our directors in the energy industry expect the supply overhang to continue and oil prices to remain weak for the foreseeable future. Petrochemicals felt the fallout from the Asian crisis early, and the inability to export to Asia has placed substantial downward pressure on chemical prices all year in spite of strong domestic demand.

The semiconductor industry continues to feel the effects of Asia. Some semiconductor plants are closed in our area, and we continue to hear intermittent layoff announcements. All segments of the semiconductor business show declines except for digital switch signal processors, which have seen 5 percent growth year over year. However, some people in the semiconductor industry feel that it may be at or near the bottom of its recession right now. Most regional high-tech firms were battered in the stock market decline. Some smaller Austin firms have put off going public because of the gyrations in the stock market and have scaled back their expansion plans.

Texas exports have felt the pains of a weak Asia and a strong dollar. Exports have been falling throughout the year, but the decline accelerated in July. The current Beigebook also suggests continued weakness in exports of petrochemicals, primary metals, liner board and other commodity paper, plastics, and semiconductors.

The construction industry has been one of the bright spots in our District, propelling our high employment growth. But it, too, is showing some signs of softening lately. Single-family housing has been the hottest sector, but we are seeing a slowing in sales of new homes. Housing inventories are still slim, though. On the office side, industry contacts are wondering whether the market has reached its peak. They note that although absorption remains good, rents are not rising as rapidly as earlier. Financing has dried up recently for a variety of commercial projects. REITs and insurance companies have scaled back their operations, citing the stock market slump and the flattening of the yield curve. Contacts tell us that some banks are not lending because of tougher lending standards even though they have the money.

Our most recent Beigebook report shows that the price picture has turned deflationary in several sectors. Weak international demand has continued to add to growing supplies and falling prices. We see price declines in gasoline, petrochemicals, oil and gas services, semiconductors, computers, primary metals, paper and paper products, and softwood lumber. Although wage pressures remain prevalent, they are not being passed forward to consumers because low input costs are offsetting any increases in wage costs.

On the national and international fronts, the risks have risen sharply in emerging market economies, and the exposure of the United States to these risks has increased. The United States is increasingly vulnerable to the effects of trade deterioration because the stock market is no longer driving U.S. consumption and investment. The real economy shows continued moderate growth, but the downside risks are increasing. Manufacturing is showing increasing signs of weakness in the face of falling foreign demand and increasing competition from imports. The manufacturing sector has lost 53,000 jobs per month so far in the third quarter. Employment growth in the payroll survey slowed slightly in July and August. Employment growth in the household survey is much weaker. There are signs that consumer and business spending will weaken from here on out. Consumer confidence has fallen off. The most recent Purchasing Managers' survey painted a weakening picture for manufacturing. Export orders were the main source of weakness. The Michigan survey of future business conditions has deteriorated markedly since the spring. The attitudes expressed by our boards of directors were very consistent with the survey's depressed outlook. The El Paso board was especially gloomy, reflecting a region hit by lower oil prices, drought, and a softening outlook for Mexico.

On the financial side, the stock market is down roughly 15 percent since the record highs posted in July. The yield curve is now inverted. These indicators are telling us that real economic weakness lies ahead. While most risks are on the downside, there are some upside risks as well. Medical and housing costs are on the rise, and M2 growth has accelerated and is well above FOMC bounds for the year. However, the downside risks far outweigh the upside risks primarily because of the international problems. A monetary policy that is effectively tight is detrimental to both domestic and global economies. The risks of Asian contagion are real. Low commodity prices and a strong dollar continue to batter the Latin American economies. Asian contagion to Brazil is the most worrisome for us in part because it has the potential to spill over to the rest of Latin America including Mexico. Recent history suggests that small or moderate devaluations, as was discussed earlier for Brazil, are very difficult to implement these days.

I concluded my statement at the last meeting by saying that in terms of the global context and our position in the world, I thought it was time to get ahead of the curve by easing monetary policy. I still think so, although it's probably too late to get ahead of the curve. [Laughter] Much additional damage has been done in the world's financial system during the last six weeks. I'm afraid history will blame us for too little too late. I hope we deal with both of those issues today and not just one--the too little as well as the too late. To paraphrase a quote coming out of Washington last January in another context, "we need sooner rather than later, and we need more rather than less."

CHAIRMAN GREENSPAN. President Boehne.

MR. BOEHNE. The Philadelphia District economy, while still operating at high levels, is showing some early warning signs of deterioration. Business people have become more uncertain and in some cases apprehensive. This anxiety began in manufacturing and is now spilling over to other businesses as well. The outlook now is significantly more guarded compared to several months ago. However, measured deterioration and actual business conditions today are still mostly concentrated in manufacturing. Other sectors report more a fraying around the edges. Retailing and construction are still holding up. Bankers report less loan demand and still acute competition, and lending terms remain looser than one might expect in this environment, especially among smaller and medium-size banks. Inflation is a word that is hardly used in the District. Labor markets are still tight, although the squeeze on earnings and less demand for exports are prompting a few layoffs and talk of more layoffs around the District.

Turning to the nation, the risks clearly have shifted to the downside. Global financial stresses are closing in on the American economy and are likely to continue to do so for some time. With the Treasury yield curve now completely below the federal funds rate and the real fed funds rate rising, there is a persuasive case for a decrease in the fed funds rate. I believe, however, that we have not fallen behind the curve and that we are still in a position to be preemptive. While it is important to move today, we also do not want to convey a sense of panic or that things are getting away from us. I think that what easing we do should be deliberate.

CHAIRMAN GREENSPAN. President Guynn.

MR. GUYNN. Thank you, Mr. Chairman. In one sense, it is difficult to find much of significance that has changed in the Sixth District since the July and August meetings. Our District's economy continues to expand at a moderate pace, but with signs of some modest slowing. Indications of some slowing showed up in the manufacturing survey where production slumped in August and fewer respondents indicated that they expect new orders or production to rise in coming months. Single-family home sales in our area are slightly weaker than this time a year ago, and the multifamily sector now seems to have passed its peak. Our commercial real estate sector remains quite healthy, but for the first time in this cycle our examiners report that some caution is being exercised by commercial real estate developers, largely attributed to a pullback by the REITs as sources of financing.

As a couple of other members already have indicated, perhaps the most noticeable development over the intermeeting period has been a decided shift in confidence and growing unease about the future; I see that among almost all my business contacts. The spread of world problems to Latin America, which is much more important economically to our region than is

Asia, clearly has heightened concerns. We still can find only pockets of activity that have been affected thus far by international crises. Hardest hit have been pulp and paper forest products and the energy sector. Echoing Bob McTeer's comments, the lower oil and gas prices have discouraged drilling. The Louisiana rig count declined to 170 in August, down from 184 in July and a little over 200 a year ago. Some producers are telling us that they are now shutting down production to wait for higher prices; they argue that oil is worth more in the ground right now. International trade winds are helping some and hurting others in our District. A Mississippi chicken producer reports that the collapse of the Russian financial markets has devastated poultry exports and disrupted shipments of 70,000 to 80,000 tons of frozen chickens; these will now be dumped on the domestic market with commensurate implications for domestic poultry prices. Ironically on the positive side, tobacco products are doing well. Cigarette demand abroad apparently is holding strong despite weakening economies. The Brown and Williamson Tobacco Company is planning a $500 million expansion in Macon, Georgia and indicates that nearly half of that production will be supported by foreign demand.

Looking forward, we expect more of the same in our District's economy. We anticipate a modest deceleration in the rate of growth, albeit from a relatively high base. One sector of our economy that may be vulnerable is tourism. While it has been quite strong and is not yet showing any significant falloff in future bookings, visitors from South America are an important part of that business and problems in that region are likely to begin to show through. We still are not seeing significant signs of price pressures. Our manufacturing survey indexes for prices of materials remain negative for the fifth month in a row, but we now are picking up more incidents of escalating wage costs due to continued tightness in labor markets. Whereas wage increases were in the 0 to 4 percent range earlier, our contacts now report them to be in the

4+ percent area for many companies. However, there is no indication that the higher wages are being passed on in the form of higher prices.

On the national front, we see a relatively strong domestic economy over the near term, and the prospects are for only moderate but clear downward revisions in our third-quarter forecast. We are now projecting third-quarter GDP growth in the 1.8 percent range. We think that the fundamentals have changed only marginally on the domestic side but that the risks are now slightly to the downside on net. Of course our chief concern, as it is for others, is the risk to continued growth due to turmoil in international markets and how much developments in those markets will feed back to the domestic economy. Compared to our previous read, affected countries appear to be in worse condition and are less poised for a turnaround than previously expected. We are getting increasing evidence from surveys of expectations, declines in corporate earnings, and the pullback in confidence that the risks from the international sector have increased and are now posing a significant downside risk to GDP growth going forward. The main question marks are how these developments will ultimately affect consumer spending, inventory accumulation, and business investment, all of which have been sources of strength over the past year. At this juncture, the outlook for a slowdown is still prospective rather than reflecting strong evidence that some slowing is currently in hand. Nevertheless, I believe the risks clearly have shifted since our last meeting and are now asymmetric to the downside in my view. Thank you, Mr. Chairman.

CHAIRMAN GREENSPAN. President Stern.

MR. STERN. Thank you, Mr. Chairman. As far as the District economy is concerned, general conditions remain favorable, although I think it's fair to say that the trends are a little more mixed than was the case earlier in the year. Attitudes have not changed dramatically, but I do think there is a little more caution and a little more concern now than there was earlier. On the positive side, labor markets remain very tight. The unemployment rate in the state of Minnesota has dropped to a new record low, and this must be the third or fourth record monthly low established this year. Housing activity and nonresidential construction activity in general remain strong. Auto sales are healthy. The weaknesses are in agriculture, where I think the problems are well recognized and are quite severe in at least parts of the District, in parts of the manufacturing economy, and in mining activity. Trade issues, especially with Canada, have become a matter of concern, and several of the governors in the District are taking actions at least to show the flag with regard to trade.

As far as the national economy is concerned, I started by assuming that the national economy would grow at trend, which is not too different from the model forecast. Then, I asked myself where the risks lie. Like others, I concluded that the risks at this juncture are mostly on the downside relative to trend growth. I don't know exactly how I would parcel that out on a quarter-by-quarter basis, but that is what I concluded. Having said that, I think we have to be careful not to get carried away with the downside risks. I am not at all sanguine, but I think it is worth reminding ourselves that there has been a lot of discussion around this table in recent months, indeed in recent years, that the equity markets have been overvalued. The implication was that those prices had to come down. Indeed they have! In some sense, we are getting what we expected or what we hoped. I think there has been a similar discussion that quality spreads were far too narrow. They have now widened out. Again, that seems to be something that we expected would happen and hoped would happen in the context of a necessity for domestic demand to slow to a pace more consistent with the growth of aggregate supply. We were concerned about the excessive availability of credit. Those conditions seem to be changing. Again, that is something that we anticipated and to some extent hoped for. In my view, what we are seeing here to a great degree is developments that we either expected or hoped for, and while, as I said, I think the risks are on the downside, I believe we should be careful not to lose sight of the fact that these developments were anticipated, at least in part. What I conclude from all this is that it is very hard to see any inflationary momentum building in the current environment. So, I think we are in for further periods of modest inflation.

CHAIRMAN GREENSPAN. Why don't we take a break at this point. President Jordan will have the floor when we come back.

[Coffee break]

CHAIRMAN GREENSPAN. President Jordan.

MR. JORDAN. Thank you. We had a joint meeting in September of our three boards of directors. What was notable about the meeting was that about half of the group said that there had been a change in confidence and the other half said there was none. At earlier meetings, virtually no one had said that there was any concern on the downside. So, this was a marked mood change on the part of many of the directors, while others from their local vantage points--their local city or economy--saw no break from earlier trends.

In construction, commercial real estate continues to be very strong throughout the District. We get more reports of overbuilding in the upper price range of the housing sector. Our contacts say that projects are falling through or are behind schedule because of labor shortages; certain construction skills are just not available. Cost estimates of some proposed new projects, especially warehouses and hotels, have come in so high that institutional investors are no longer willing to provide permanent financing because the implied yields are so low. In contrast to that concern about low yields, the Cleveland Browns franchise was sold for $530 million plus stadium cost overruns that are estimated to run between $35 and $50 million. One of the investor groups backed out, saying that above about $350 million they no longer saw any current yield. But a spokesperson for the NFL said in the New York Times that even though some are concerned about a very low or nonexistent current yield, the owners can count on capital asset appreciation! Builders report that local banks are still willing to provide 100 percent construction financing without pre-arranged takeouts in the form of permanent financing because of their knowledge of the projects and the builders. But our contacts believe that institutional investors are backing away, especially out-of-area investors. One banker commented that the young developers in the region believe that they are bulletproof.

Probably the worst situation in the District is that of the steel industry. Steel is being impacted very severely by imports. While domestic consumption is going to be at record levels this year, we are told that imports were up 43 percent in July. The steel companies are now telling us that there will be consolidations, permanent plant closings, and companies taken over by foreign investors, probably the British, because the domestic companies are in so much difficulty.

One theme that came out of meetings with advisory council members and others around the District is investor caution. We get reports that the fear factor is pervasive. We hear claims of a daily buildup in cash on the sidelines; investors are parking cash because of uncertainty and are waiting for it to subside. We hear nothing about what will dissipate the fear, when it may happen, and what will be done with all the cash that is parked on the sidelines waiting for the green lights to come on again.

Labor markets continue to be extremely tight. Turnover is rising and finding qualified replacements is taking longer and longer. One of the banks that hires throughout the region and in several other states said that a year ago starting tellers were earning $7 an hour; they are now earning $10. The bank expects their nonexempt pay to be up 4¾ to 5 percent this year versus 4 percent in 1997. They also reported, like some others, that mortgage lending is at record volumes.

Our retail sales have been very strong. Retailers say that sales and profits for the third and fourth quarters will be at record levels and that retailers that source from Asia are doing especially well. They are not as optimistic about 1999 but extremely optimistic about the way this year will finish. In contrast to what somebody else said, sales of home furnishings have been very strong, probably reflecting the housing industry. Telecommunications also are very strong.

We decided to check on a couple of developments in parts of the service sector that had not otherwise been reported. One was what is happening to hotel rates, but after the staff memo on the Watergate, I guess I don't need to report on that! We contacted major theme and amusement parks in the region. I myself as part of our research effort spent a weekend looking at those roller coasters at Cedar Point! They boast about having more and bigger roller coasters than anywhere else in the world. They and other theme parks in the Pittsburgh and Cincinnati areas boosted ticket prices this year by 6.5 percent to 6.7 percent, yet attendance also was up in excess of 6 percent at all of them, giving them double-digit revenue gains this year. One big park said that they will boost ticket prices 10 percent further in January and February next year. To deal with the labor shortages, one of the parks reported hiring 500 foreign students this summer.

Another bit of evidence as to the psychology in our area is that caution apparently did not hit Kentucky because the thoroughbred horse auction was the best ever. Average prices were up 35 percent from last year. More yearlings were sold for over $1 million than in any year since 1980. In two days alone in September 56 yearlings were sold for over $1/2 million each. Most of those horses will be sent to Europe and Asia.

Turning to the national economy, I can save some time by saying that I agree with Gary Stern that a lot of the changes--the break from the past that we have seen--were essential.

We have known for a couple of years perhaps that there were certain unsustainable trends at work. As some sage once said, unsustainable things have a habit of ending. We may not like the way they ended, but it was essential for that to happen. The difficulty now is how to deal with the attendant shocks to confidence. We have a long history of responding to domestic events such as Nixon's wage and price controls and the stock market crash of 1987 and to international events such as financial crises and military actions--including among the latter the Suez, the Bay of Pigs, and the Gulf War in the early part of this decade. When these things happen, there tends to be a rush to liquidity and a rush to quality. The yield curve steepens at the short end and people seek to invest in better grade assets. The central bank had to respond to such developments in order to avoid an inadvertent contraction of central bank money. But in this environment, we have to be very, very careful about how much of a response we make because the developments in question tend to be reversed. The response has to be limited and proportional to the problem because of the unavoidable necessity of taking out an injection of liquidity as confidence starts to rebuild. We do not want to err on the other side. We have had a number of episodes in the past where we responded to surprises and overstayed our response. The cost of then taking corrective action in terms of contracting central bank money and raising interest rates had some unfortunate effects. Thank you.

CHAIRMAN GREENSPAN. President Hoenig.

MR. HOENIG. Mr. Chairman, if you were to ask how the Tenth District is doing today, you would get two answers. If you looked at any metropolitan area, you would see that its economy is still very strong, with tight labor markets and unemployment rates that are extremely low. When you looked at retail sales, you would find that they remain very strong. If you looked at housing, you would find it strong overall. You also would hear a lot about changes in attitudes in the sense that while business conditions are strong, people are much less confident about the future. We are seeing some of the effects of Asia in our manufacturing sector, in health products for example, and we have anecdotal indications that at least some firms are backing off on plans to invest in plant and equipment as they look to the future. But, currently, the metropolitan area economies are still in very good shape in our District.

In the rural areas and in the energy sector, we get a completely different answer. Contacts in the energy industry, as you already heard for some other Districts, are very pessimistic about the outlook for oil. Natural gas, which is more predominant in our region, is a question mark; its prospects depend on how the winter goes. Contacts in the agricultural sector are very pessimistic. I know you have heard some of the statistics, but I would note that we normally export about 40 percent of our agricultural products to Asia. So demand is down.

CHAIRMAN GREENSPAN. Is the 40 percent for the Tenth District or nationwide?

MR. HOENIG. Nationwide, but I would say that percentage is not too far off the mark for the Tenth District as well. We are having some bumper crops this year, 20 percent increases in some areas. That is on top of earlier increases. So, prices obviously are down. Our banks are saying that their loan portfolios currently are in satisfactory condition, but they anticipate loan problems going forward. They already are contacting us and others about what the attitudes of examiners are going to be with regard to carrying over loans and so forth. So, there is a fair degree of bearishness in that sector of the economy and concern especially among banks in the rural areas. However, we need to put that in the context of the District as a whole, which still appears to be generally sound.

On the national economy, I think the most likely outcome next year is for real GDP growth to slow to below trend and for inflation to remain moderate. I am concerned about further downside risks to the domestic economy. Therefore, I believe a slight easing of policy would be appropriate at this time. But I, like Ed Boehne, would be cautious and deliberate in adjusting policy at this time. I don't think we would be behind the curve after a small move.

I want to add a couple of points relating to policy. First, while I see growth moving down toward or below the economy's long-term potential, I am not as pessimistic as the Greenbook at this time. I think that is why I also am cautious about how deliberate we are in adjusting policy. Second, I believe there are significant downside risks to the outlook, as I mentioned. These stem from the fact that there are significant slowdowns in the economies of Latin America and Canada that could cause our own economy to grow more slowly. We need to keep that in mind. In that context, inflation should remain moderate in the near term, and a number of factors should help to keep it in line for the foreseeable future. I would not, however, recommend a more significant easing. I am mindful of the fact that our record in forecasting growth slowdowns has not been overly accurate in recent years, and therefore I think we should be cautious. As others have mentioned, M2 is growing strongly. So, I think a deliberate ease in policy would benefit the economy, and I would go cautiously forward with it. Thank you, Mr. Chairman.

CHAIRMAN GREENSPAN. Vice Chair.

VICE CHAIRMAN MCDONOUGH. Thank you, Mr. Chairman. The Second District economy has slowed somewhat during the third quarter, with continuing job losses in the manufacturing and government sectors. Not surprisingly, the anecdotal evidence is considerably weaker than the data. There is real concern throughout the District about the growth prospects both for the Second District economy and that of the nation. This lesser degree of optimism or beginning of pessimism is not reflected only in the financial sector, where it is quite understandable, but around the District as a whole. Needless to say, some major firms in the financial sector have announced rather significant losses that have important implications for the tax revenues of state and local governments in our District. The firms in the securities industry and the banks that compete with them are very concerned about their profit prospects in the fourth quarter because of their sharply reduced deal flows.

Our national forecast is somewhat more optimistic than that of the Greenbook, in part because we do not have quite as strong a wealth effect. But our sensitivity analysis to our own forecast has a downside alternative that produces an outcome that is quite close to the comparable alternative in the Greenbook. Like everybody else, we see the main source of the weakness as stemming from the effects of international weakness on the performance of the American economy.

Let me speak briefly on how I interpret the very wide credit spreads that have emerged. I don't spend a whole lot of time worrying about the level of prices in the equity markets because I think the credit markets are really more important for the economy as a whole. The spreads in the credit markets were certainly unnaturally tight earlier this year, but the correction has carried these spreads well beyond a return to normalcy. The current spreads are very wide indeed, and they indicate in my view that we have to be concerned on the downside that risk aversion will become unduly great. The result could be that not only would the credit markets be essentially unavailable to firms that normally deal with banks, but the banks themselves might in this environment become sufficiently risk averse that we could get a credit crunch. I am not forecasting that, but I see it as a serious downside risk that we have to be concerned about. I think we have to be extremely attentive, especially in the Reserve Banks with our proximity to the banks in our Districts, to whether that is happening or not. There is no question that in the securities firms and banks with which I am familiar, the executive vice president in charge of marketing has been put in the closet and the executive vice president in charge of credit is now in front taking charge. That is a good development as long as it does not get into the risk aversion area to a point where a credit crunch could follow.

CHAIRMAN GREENSPAN. President Broaddus.

MR. BROADDUS. At least for the time being, overall economic activity in our District remains at a very high level. Revenue growth in the broad service-producing sector slowed in August but picked up again in September. There was a noticeable rise in retail activity essentially across the board in September. As in many other Districts, residential construction and new home sales are still quite strong throughout our region. More generally, our contacts indicate that there has been no perceptible easing in the extraordinarily tight labor market conditions we have experienced for many months. Workers with even minimal job skills are hard to find in many areas. Skilled construction workers are especially scarce. We had a meeting of our Small Business and Agriculture Advisory Council last week and they were particularly direct in describing the tight labor market conditions in their respective industries and areas.

That said, we are now seeing for the first time some unmistakable signs of softening in the region's manufacturing sector. Manufacturing is important in our region. A special note: A couple of components on our monthly manufacturing survey, namely new orders and planned capital spending, slowed quite sharply in August and September. A number of manufacturers, as in other parts of the country, had been telling us about reduced exports and increased competition from imports. One especially high profile example of a change in sentiment in the manufacturing sector was the announcement a couple of weeks ago by Motorola that they are going to suspend construction on a new $3 billion chip plant that was being erected near Richmond. That is a big blow to our local community. They did not announce any time frame for resuming construction. In my view, manufacturers in our region now clearly have the sense that they have bigger problems and that these problems may last longer than they had thought previously.

Turning to the national economy, I would like to add a note of caution, and I guess I am underlining some of the things that Gary Stern, Jerry Jordan, Tom Hoenig, and others have said. It is certainly true that the overall national picture has changed quite radically in many ways over the last couple of months. As we all know, the Russian devaluation and default, doubts about the effectiveness of the IMF, and perhaps to some extent a perceived world leadership deficit have produced a quantum jump in risk in world financial markets. I think that has been a seminal event. One can see it in the data, as Bill McDonough said, and it is quite dramatic. The Salomon Brothers spread on Brady bonds over U.S. Treasuries, for example, increased by fully 5½ percentage points between the end of July and the end of August. That is not much less than the cumulative increase in that spread over the much longer period when we were tightening policy back in 1994 and 1995. This increased financial risk is significantly complicating adjustment problems in the world economy, and in the United States it probably accounts for a good part of the decline in stock prices and the apparently tighter conditions in loan and other credit markets.

I certainly agree that these shocks will likely take some of the steam out of domestic U.S. demand. That is probably a good thing. But it is still unclear to me how sharp the ultimate slowing is going to be. Even with a 75 basis point decline in the funds rate built into the forecast, the Greenbook expects the real GDP growth rate to fall to only 1 percent in the first half of next year and then to rise only ½ point to 1½ percent in the second half. However, there still is no really hard evidence as I see it that the U.S. economic expansion either is or will soon slow in a major way. It may happen. Certainly, the downside risks are greater than they were, but it may not happen. Labor markets are still tight. Wages are rising. Consumer confidence is down from its peak, but it could pop back up in the wake of any easing action we may take. Also, the rate of growth of M2 over the last 18 months or so, as far as I am concerned, still constitutes an inflation risk in the outlook. The most recent M2 surge probably does reflect a flight to liquidity, but the rapid M2 growth in the earlier months of this year and late last year did not. This latest bulge could well reflect in part the prospective policy easing that is now apparent in fed funds futures rates.

If we ease policy now, as assumed in the Greenbook, in reaction to events that many in the United States regard as largely a foreign problem, we run at least some risk in my view of creating a perception at some point that our longer-term price stability objective has changed or at least that we are being distracted. There is a risk that we may in fact be distracted to some extent from our long-term price stability goal. I think that risk is heightened by the tightness in labor markets and the general strength of the economy.

The good news at this stage, of course, is that markets have already priced in much of the policy easing that is assumed in the projections. As yet, bond rates have not risen; they show no increase due to heightened inflation expectations. For now at least, I think we still have our credibility and it is holding up well. But I do hope we will watch closely as we go forward for any evidence of eroding public confidence in our commitment to price stability if we follow the policy strategy that is laid out in the Greenbook.

CHAIRMAN GREENSPAN. Governor Ferguson.

MR. FERGUSON. Thank you, Mr. Chairman. For much of this year, as others have said, we have been waiting for a financial upset to hit our shores, and it looks as though that is about to happen. While many of us have migrated to a view of noticeably weaker growth, and I am among them, I think it's important to reiterate two realities that others have brought out. First, of course, this weakness is a forecast. Domestic weakness is not yet here. In fact, labor markets, as others have said, remain tight. Anecdotal evidence suggests that the demand for workers is still strong in some sectors. GDP is likely to grow at or above trend for this quarter and the next. The boost to GDP is the result of two things: the first, obviously, is the return of the GM workers and the second is the continued strength of some interest-sensitive sectors of the economy. PCE jumped as consumers purchased more automobiles. Orders for durable goods indicate continued increases in shipments and spending, albeit at lower rates than in the first half. Retail sales reports are strong and anecdotal evidence indicates no slowing yet in housing or housing-related durable goods. I think I heard a little of that around the table. There clearly remain some risks of higher inflation, though I will agree with others that they have gone down significantly.

On the negative side, employment growth is down further and the likely impact of international financial turmoil has become much clearer. For me the important source of potential weakness from the foreign side is not necessarily in the traded goods sector even though that will continue to be a source of drag on domestic economic activity. What is more worrisome in my view is the transmission of financial weakness abroad to our financial markets and the resulting impact on the investment behavior of U.S. businesses. I guess it should not be a surprise that weakness will emanate from the investment activities of firms after a period when growth has been heavily driven by business investment spending. Importantly for me, a lot of this investment spending from corporations has been maintained during this period by both cash flow and leverage. We have not talked much about it in this room, but I believe that nonfinancial corporate debt grew at an annual rate of about 12 percent in the first half of this year. The difference between capital spending and internally generated funds, what many call the financing gap, is I believe at its highest level since the recession of 1982. This approach to corporate investment, which includes both cash flow and leverage, makes such investment particularly vulnerable to changes in financial conditions, psychology, and profit prospects, all of which we have experienced recently.

I agree with Vice Chair McDonough that the vehicle for this weakness is not purely stock market effects where we in fact had expected some deterioration. Of greater importance to me is the fact that it is more broadly centered in credit markets. We have heard from the staff that the syndicated loan market appears to have become less accommodating, and that is causing some banks to pull back to some extent from lending. I am concerned that if that reduced willingness to lend is combined with significant increases in the cost of capital from the stock market, we will face a real risk of serious capital-raising constraints. Like Vice Chair McDonough, I am not predicting a credit crunch, but I am mindful that it is not out of the realm of possibility. It also seems likely that a slowdown in credit-driven business investment will lead to slower growth in job incomes and wealth-driven consumption. Thus far this year consumption has surprised us on the upside, driven by tight labor markets and by high equity values. It seems, though, that both of these factors have begun to unravel or will shortly do so. Equity markets already have done so. Labor markets will adjust gradually over time.

For me the final question is what the reaction of this Committee should be. As others have indicated, the international side seems unlikely to settle sufficiently or sufficiently quickly to alter the scenario. No other major economic power seems capable of engendering the growth of demand that we need to maintain near-term trend growth in our country. But like President Boehne and others, I believe that any monetary policy adjustment that comes out of our meeting today should be done very judiciously. There are some elements of strength in the economy. The downside risks are still quite high, but we could again be surprised on the upside. I for one do not think we are yet behind the curve. Thank you.

CHAIRMAN GREENSPAN. Governor Gramlich.

MR. GRAMLICH. Thank you, Mr. Chairman. Coming late in this discussion, there is not too much to say that has not been said many times already. That is the good news. I would point out that there has been a quite important change in the general comments of the Reserve Bank presidents in the past several meetings, though maybe not a sea change. My own forecast, such as it is, is fairly close to the Greenbook; I am roughly in agreement with the Greenbook scenario. While it is true that more is influencing the slowdown than the stock market, I think there is an important point to be made about the stock market that has not been brought out today. That is, if we look at forecasts of earnings by the so-called stock market analysts, they would still be on the high side by all measures. What seems to happen in the way these forecasts are put together is that as disappointing numbers come in, as they have recently, the current quarter is downgraded but not the future quarters. There is still a lot of that going on. I think the Greenbook is on solid ground in anticipating a further decline in stock prices and a feedback on the real economy through the consumption wealth effect.

One concept that we have not talked about much this morning is NAIRU. I think that if we are coming out in the direction of an easing move, as it seems to me most people are, we should at least go through a mental test on why we are doing so when we have an unemployment rate that is sitting at 4½ percent. Many of you have addressed the fact that you see very little evidence of accelerating inflation. On the TIP premium that we talked about earlier, my view is that while liquidity preferences and transaction costs may account for some of the TIP premium, I think there is some information there as well, namely that it reflects a general downgrading of inflation worries. So, with regard to the NAIRU, I guess the story on inflation would be a combination of things. On the one hand, those who think the NAIRU is 5½ percent or thereabouts may be a little off on that estimate. The other aspect, however, is that even in the Greenbook forecast there is projected to be a rise in the unemployment rate.

All of this together adds up to a recommendation on my part for easing as we have previously discussed. I think the main question is whether to ease a lot or a little. The arguments are actually nicely made in the Bluebook, and I will not repeat them. I will just say that where I come out on that issue is that I am for cautious ease. One reason is that I believe we are still ahead of the curve in terms of managing the real economy. I don't think there is a sense in which, if we just look at the real economy, we can be described as being too late or behind the curve. Dave Stockton pointed out that there still are upside risks and we should keep those in mind. I think that Al Broaddus made a good point when he said that if we go too far at this meeting, it might look as if we have become distracted from what should be our fundamental goal of dealing with inflation. We certainly would not want to send out that message. The last point, which others have made, is that a big move at this point might be misinterpreted as a degree of panic on our part. It would be at a minimum very un-Fed-like, and we certainly would not want that. [Laughter]

CHAIRMAN GREENSPAN. Governor Rivlin.

MS. RIVLIN. Let me start with the world situation. Like many others, I find the world economy both sad and scary. The saddest part is that so many millions of people in developing countries in Asia and Latin America are being thrown into desperate circumstances just at the point when they were beginning to have hope for the long-run future. Many of them have not been in the modern world all that long. They left villages and in many cases their home countries in search of jobs in modernizing economies. Now they are being thrown back into insecurity and a struggle for bare necessities with no idea if or when the economic opportunities for them will reopen. I stress that because I think we sometimes tend to sit around this table and act as though all the losers were investors and high flyers. They definitely are not.

The scary part is that those of us who believe strongly and rightly in the power of capitalism to improve peoples' lives do not know where the current downslide will end or what we can do that will effectively stop its spreading contagion. We already knew, of course, that when large amounts of capital are moving freely in search of higher returns that investors can be victims of their own excessive optimism and then get caught in a wave of excessive pessimism. We also knew that capital flows were far greater than ever before, that world markets were more interlinked, and that financial movements were more rapid in an age of instant global communications. But I don't think we knew how big an impact that might have. We knew that very clever self-assured people were placing huge bets with other peoples' money on relationships that they could only guess about, that sooner or later some of them would guess wrong, and that the consequences could be serious. But now that the exuberance has turned to pessimism and risk aversion and so many of the weaknesses in the world's financial structure have been revealed--some we knew about and some we are just learning about--the economic policymakers in industrial countries are struggling to figure out how best to manage the crisis and where and how to build firebreaks in hopes of containing the meltdown so the rebuilding can begin.

That is a very difficult job, but it is not our job around this table. The job of this Committee is a much narrower one. It is to keep the U.S. economy growing at a healthy rate, not only for the well being of Americans themselves but so we can play as strong a role as possible in bringing the rest of the world back to economic health. For the last couple of years, indeed the whole time I have been part of this group, we have been primarily worried that the United States was growing at an unsustainably high rate. Now many of the signs point to slowdown, although it is striking that the anecdotes about the domestic economy are a lot more negative than the real statistics so far. Nevertheless, the risks have shifted, and clearly one risk to worry about is that if the United States slides into stagnation or even recession--although that is not likely to happen soon--we will further exacerbate the world crisis.

I don't think we have a hard choice today. We need to take a small step in the direction of monetary ease. We need to stand ready to take more steps if necessary, but I certainly agree with those who feel that rushing quickly ahead would gain us little and probably would be, as Ned Gramlich said, an un-Fed-like thing to do.

CHAIRMAN GREENSPAN. President Poole.

MR. POOLE. Conditions in the Eighth District, as we have heard around the table with regard to other Districts, are largely unchanged in the real economy. I think it's fair to say that the mood is less buoyant than it was earlier. The financial market upsets, again in terms of the real economy, have been I think largely a spectator sport so far, although one that is much less fun than watching Mark McGuire. I want to reemphasize the point that Bill McDonough made. The stock market decline is a very typical decline; its size is nothing abnormal, but the spreads that we have seen open up in lower quality credits indicate a very abnormal state of affairs. The spreads were too narrow before, but they are now much too wide. If those spreads remain that wide, they will be an indication of a very serious drawing back in the very near future. So, I interpret the conditions in my own District and the stories that we hear as simply reflecting the fact that the financial market upsets have not yet registered in the lending and spending activities that affect the real economy. The stock market declines should make us feel good in a sense, but I will confess that every decline, especially the big declines, give me a very uneasy feeling. Every recovery that we have had in these volatile markets has made me breathe a little easier. As I see it, the situation is quite uncertain right now.

The variance of the outlook has certainly increased. The soft landing scenario is something of a central tendency, with a fairly wide range of perfectly plausible outcomes on either side. It may be the best bet down the middle, but there is some significant probability on both sides. That suggests we may have a lot of business ahead of us as the information comes in. If we get the soft landing, then I would suppose that the spreads will have to narrow because everything will seem to be coming out all right and the financial markets should settle down. That obviously is what we want. Clearly, we will continue to see adverse effects coming from abroad. The recessionary trends abroad are affecting U.S. exports and the import-competing industries; steel is a good example. Those effects are very real and to some extent we are going to end up with an economy that is going in two directions, with some domestic activities very clearly impacted by the foreign sector. But the external sector is not by any means the largest segment of the national economy. If the home-grown industries--the service industries, construction, housing, domestic investment--can all remain solid, we are going to come out all right on a national average basis, although the hurting industries will to continue to hurt until conditions improve abroad.

With regard to the outlook, it seems to me that we have something of a race between two forces here. Interest rates on low risk credits have declined. Borrowers who are very well situated, such as homeowners who can put down substantial equity, are going to have their activities stimulated by this environment. On the other hand, the more risky borrowers are going to be held back. They are going to have projects cancelled. So, we have a race between these two forces that will determine exactly how the economy comes out over the next quarter or two. Of course, that will then determine whether the economy tips over into a genuine recession or whether it in fact ends up with a soft landing. So, I certainly agree that the balance of risks has tipped very decidedly over into the negative side. I think that the flight to quality does explain recent rapid money growth, but I want to emphasize that the dramatically increased spreads in the financial markets are highly abnormal. They just do not represent business as usual.

CHAIRMAN GREENSPAN. Thank you. Governor Kelley.

MR. KELLEY. Mr. Chairman, events are moving quite rapidly. It was only last July that the Committee began to get concerned about the emerging bifurcation being introduced by an ongoing very strong domestic economy interacting with a deteriorating international situation. In less than 90 days, policy risks have shifted dramatically to the downside. If the Committee should respond to this situation this morning by easing policy, I will support that decision but not without considerable hesitation and misgivings. While growth in overall economic activity clearly has been slowing recently, our domestic economy remains remarkably robust. Though decelerating from earlier this year, final sales remain strong; labor compensation is rising; new jobs continue to be created; consumer sentiment remains high; long-term credit is available at rates not seen in decades to support housing and motor vehicle sales; and the stock market has slipped but it has not collapsed. If this beat goes on for long, the slippage in capital spending could soon reverse and an up-cycle in inventory spending could once again emerge.

It may well be that we will experience no more than the moderate slowing of the expansion that we have long expected and for which we fervently have hoped. The odds have become lower that this is all the weakness that will occur yet it is highly questionable in my view that slower economic growth alone would call for an immediate reduction in interest rates. Of course, far more is involved as this situation plays out against a background of ailing world economies, fragile financial markets that could turn very ugly very quickly, and a continued quiescent inflation rate in the United States. I am concerned that we are now at risk of falling behind the curve. It would seem on balance that we have an opportunity here to take out a modest and relatively inexpensive--in terms of risk--insurance policy, and I believe we should do so. Consideration of actions stronger than that should await the unfolding of future events. Thank you.

CHAIRMAN GREENSPAN. Finally, Governor Meyer.

MR. MEYER. Thank you, Mr. Chairman. What has changed between the last meeting and today that could justify an easing? That clearly is the question of the day. The answer is not the initial conditions, in terms of very tight labor markets, nor the near-term pace of the expansion. Second-half GDP growth still looks to be close to trend, at least to my estimate of trend. That is, of course, a significant slowdown relative to the rate of growth in the first half, but it is in line with earlier expectations and it will leave labor markets still very tight at the end of this year. Nor do I see anything in the most recent data relating to the strength of the expansion to justify a change in policy. The forecast? Well, that's a different story and that is my point. Any policy action today must be based squarely on and be defended in terms of the forecast for 1999, specifically on the change in that forecast justified by recent developments. The staff did an excellent job of identifying and quantifying the effects of three recent developments.

The first is the downward revision to foreign growth due importantly to a downward revision in growth prospects for Latin America. The second is the sharper-than-anticipated decline in equity prices that suggests a downward revision to consumer spending and quite likely to business fixed investment and residential construction as well. The third is a widening of risk spreads and a generally reduced appetite for risk that might well have an incrementally adverse effect on spending. Taking the direct impacts of the first two, adding a smidgen for the difficult to quantify latter factor, and then applying an appropriate multiplier gets me to something in the range of a ¾ percentage point downward revision to my growth forecast for 1999, albeit from a somewhat higher initial forecast than that in the last Greenbook.

The change in the forecast can perhaps best be understood by differentiating what I call phase two of the global turmoil from phase one. I date phase two from the Russian moratorium and devaluation and the increased pressure on Latin American economies that immediately followed. Interestingly, phase two does not appear to have an especially adverse effect in terms of its incremental effect on net exports, certainly when compared to the effect of the crises among developing Asian economies and the deterioration of the Japanese economy during phase one. However, whereas phase one was accompanied by offsetting positive shocks in the form of lower U.S. interest rates stemming from safe-haven capital flows and lower oil prices, phase two in contrast is accompanied by the reinforcing adverse effects of a decline in equity prices and an increase in risk spreads as well as by a coincidental increase in oil prices due to supply cutbacks. A second likely difference is that whereas phase one was accompanied by an unexpected and largely unexplained surge in private domestic demand, phase two will likely be accompanied by a spontaneous unwinding of that exceptional strength.

I have emphasized previously the distinction between central tendencies and asymmetric risks in the current forecast, and I believe this aspect of the outlook is also relevant to the policy decision. I have to admit that when I hear someone say that the risks in their forecast are asymmetric, my first inclination is to encourage them to rethink that forecast and return when they have managed to produce one where the risks are symmetric. I believe our staff has followed this philosophy more than most forecasters. They assume, for example, a break in Brazil's exchange rate regime and a fairly sharp adjustment in growth in Latin America, and they have a further decline in the stock market on top of the recent correction. Nevertheless, when there are potentially important one-sided discontinuities in the outlook, as I believe there are today, risks can legitimately be asymmetric. As a result, there could be an important difference between the modal forecast--the best guess and the most likely outcome--and the mean of the probability distribution of outcomes. Both are relevant to the policy decision.

On balance because my previous forecast for 1999 was not as pessimistic as that in the August Greenbook, I end up with a somewhat higher growth forecast for 1999, even allowing for a similar downward revision to growth. But I do expect growth to be decidedly below trend next year. Given my expectation of somewhat faster growth than in the Greenbook and therefore a slightly lower path for the unemployment rate, I anticipate a bit higher inflation than is projected in the Greenbook. However, I agree the weaker growth now in prospect and the projected rising path of the unemployment rate should restrain inflation going forward. The policy question, of course, is whether the projected slowdown crosses the line from benign to undesirable. I will save that assessment for my policy statement.

CHAIRMAN GREENSPAN. Thank you very much. Let's now move on to Don Kohn.

MR. KOHN. At your conference call last week, most of you seemed to favor easing policy at this meeting. I will briefly review the case for an easing action before discussing the factors bearing on how large the cut in the federal funds rate should be.

The case for easing does not rest on incoming data about the economy. As many of you have noted, the information that has become available since your last meeting indicates that the economy continues to expand at a pace around the growth rate of its potential. That has kept the unemployment rate flat at a very low level, and inflation has edged higher on a 12-month basis, at least as measured by the core CPI. Thus, a standard, backward-looking Taylor rule that called for a 5½ percent federal funds rate in August would continue to do so today.

Rather, the case for easing relies on projections that have been marked down by developments overseas and in U.S. financial markets. Most significantly, the sea change in investors' perceptions of risk and their apparent heightened unwillingness to take those risks has continued to spread globally, hitting the Americas with greater intensity. Financial conditions have become more restrictive throughout the hemisphere, especially in our important export markets in Latin America and Canada where the authorities have had to tighten monetary policy to defend their currencies.

While Committee members may have had stronger economic forecasts than the staff, it is likely that most of your projections also have been reduced noticeably by these events. In that case, if you considered the federal funds rate to be at an appropriate level in August, it probably should be lower now. Even if Committee members had not marked down their forecasts of the most probable outcome for economic growth by very much--or only by enough to become more comfortable with the inflation outlook--the lower tail of the distribution undoubtedly has gotten a good bit fatter. In that regard, the Committee might see these as the appropriate circumstances in which to take some risks on the side of trying to ensure that U.S. economic growth comes close to being as robust as possible, consistent with continued low inflation. Prolonged sluggish expansion in the United States would seriously undermine recovery prospects in the rest of the world and eventually feed back on our own economy.

Much of the benefits of an easing move was realized for financial markets when expectations came to embody action today. That process helped to level out risk spreads in some domestic markets and to reduce spreads on Brady and other dollar-denominated sovereign bonds on international capital markets. It probably also has helped to halt the drop in equity prices after their sharp fall in August. Failing to follow up by actually easing could undo much of that.

To be sure, it is important not to be, or to be seen as, attempting to support particular values in capital markets. A good part of the market adjustment, at least in the United States, probably has reflected appropriate reassessments of business risks and prospects. And in some markets, such as that for U.S. equities, the reappraisal may not be complete. But the Federal Reserve can try to keep the real economy on an even keel as financial market adjustments are made, and the Committee may see that objective as now requiring some reduction in a real federal funds rate that had been kept at an unusually high level in part because of financial market exuberance.

A cautious approach to easing, characterized by a 25 basis point reduction in the federal funds rate, might be justified by the situation now prevailing in the economy. With the unemployment rate well below most estimates of its sustainable level, the Committee has long been of the view that economic growth needed to slow substantially from the pace of the last few years--most likely to below trend--just to keep inflation from accelerating. As yet, there are few signs that the economy already is slowing enough to begin to relieve labor market pressures, much less that it is decelerating so sharply as clearly to require monetary policy easing. Inflation risks associated with the tight labor market are heightened by the possibility that some of the factors damping price increases in recent years may already be reversing--the dollar is falling against currencies of other industrial countries, health care costs are rising faster, and oil prices have begun to firm. Whether inflation expectations will remain subdued as these influences turn around is an important uncertainty in the outlook.

Caution in not moving the federal funds rate by very much also may be seen as consistent with basing the action primarily on projections rather than actual data, particularly since it is difficult to be confident about the effects of a change in the federal funds rate in the current highly skittish financial market environment. To be sure, a series of tightenings in 1994 was initiated largely on the basis of projections, but the Committee waited until it was sure the economy was strong, and much of the subsequent policy firmings occurred against the background of surprisingly robust growth and early signs of rising inflation pressures. The analogous strategy at this time might be to begin with a small action and build on it should further developments in either the financial markets or the economy indicate that the shock to spending was in fact turning out to be substantial.

Lastly, holding the action to 25 basis points may have some appeal if the Committee thought both that the act of easing in any amount would itself usefully reassure financial markets, households, and businesses that the Federal Reserve recognized and was responding to potential problems and that in total not much easing would ultimately be necessary to support adequate economic expansion. In these circumstances, a relatively modest action now would be desirable so that one or more further easings could be undertaken in response to changing conditions without risking excessive stimulus to growth and a potential intensification of inflation pressures.

Reducing the federal funds rate by 50 basis points might be appropriate if the Committee instead saw the situation as one that required, or was highly likely eventually to require, substantial policy easing. In the staff forecast, a decrease in the federal funds rate of 75 basis points is needed to keep the economy from dropping below the level of its potential in the year 2000. Absent such policy easing, the added restraint on aggregate demand that emerged in the period between the August and the September Greenbook projections would reduce the growth of the economy by almost one percentage point next year.

While the most likely outcome is that credit conditions will end up only moderately less accommodative, recent financial market developments suggest that the odds may have increased of a significant further tightening in credit availability with associated downside risks to the economy. Questions about the financial soundness of a number of financial firms have intensified in the wake of the near failure of Long-Term Capital Management. Were this process to continue, or the settling down in the market that the staff has anticipated fail to occur, the result could be greater disruptions than in the staff forecast in the access of households and businesses to credit, in part as intermediaries incurred higher costs and turned more cautious in their lending to conserve capital. The longer volatility and uncertainty persist in financial markets, perhaps the higher are the risks that they will feed back on business and household confidence and spending plans.

An easing of 50 basis points, if accompanied by a sense that the Federal Reserve would then be on hold for a while, would reduce one source of volatility in markets for a short time--that is, guessing about immediate Federal Reserve action and parsing statements of Federal Reserve officials for the probabilities of such action. Because markets would be somewhat surprised by a full 50 basis point reduction today, there might be an adverse initial reaction in the prices of riskier assets should participants infer that the Federal Reserve saw the situation as difficult enough to take a somewhat unusual action. Over time, however, market participants could find reassuring your willingness to act forcefully.

Because a 50 basis point easing at this meeting is not fully built into the structure of interest rates, it would provide some added help to emerging market economies running tight monetary policies to defend their currencies. The associated drop in the exchange value of the dollar might even nudge the monetary authorities in the United Kingdom, continental Europe, and Canada to ease their policies. It would be of no help to Japan--since the added demand in the United States for Japanese exports arising from higher income here would be offset by the effects of a higher yen--unless it induced the Bank of Japan to use the remaining 25 basis points between its policy rate and zero!

Presumably, an easing of 50 basis points would be associated with adoption of an unbiased directive. A smaller decline of 25 basis points might be associated with either a symmetrical directive or one that was asymmetrical toward easing. The latter would connote that the Committee wanted to remain especially sensitive to the potential need to ease further, perhaps because it still saw a relatively greater potential for surprises--in foreign economies and domestic financial markets and in the spending plans of businesses and households in reaction to ongoing developments--that would imply considerable further restraint on demand in the United States.

CHAIRMAN GREENSPAN. Questions for Don? If not, let me proceed.

A number of you have argued, quite persuasively in my view, that there are only limited hard data that suggest any loss of momentum in the current expansion. I can find only two statistics that point to some weakening, although I am sure there are more. One is a significant drop in the production of steel ingots in the last two weeks.

MS. RIVLIN. Only you would know that!

CHAIRMAN GREENSPAN. Well, I hesitated to mention it because it is such a small item. Second, the latest data indicate a fairly dramatic decline in construction awards for nonresidential building. Beyond that, we do not find significant weakening in equipment orders. Retail sales are not terrific, but obviously they are not doing too badly. Motor vehicles, which are a crucial factor, are softening a little but hardly enough to take note. Actually, the ratio of used car prices to new car prices, which has not been a bad short-term indicator, has turned up a little. Homebuilding may be off a bit, but it is still quite elevated by any objective measure. So, as we look across the board, it is very hard to find any indicators of significant softening. To be sure, the labor market is exceptionally tight, although we have had a modest increase in insured unemployment. It popped up with the GM strike and did not reverse fully after the strike was settled. I might add that the low level of initial claims relative to insured unemployment probably reflects declines in both hires and layoffs in relation to the number of employed workers. That is showing up, incidentally, in the household data as well. A more relevant indication of a weakening labor market would be an upturn in the level of insured unemployment. That level has risen a little but scarcely enough to argue that we are seeing a significant development.

The crucial development, which has been mentioned numerous times around this table, is that we are observing an important shift in attitudes toward risk. The reason is that one can generalize and explain the business cycle, perhaps in an overly simplistic way, as reflecting shifting views toward risk. When there is a general sense of declining risk, there is a tendency to reach out into the future. That is another way of saying that the cyclically sensitive areas of the economy--capital investment, construction, consumer durables--all accelerate as the result of efforts to invest in the future. The downside of the cycle occurs when there is a widespread perception of rising risks.

We would certainly expect to see a change in psychology before any significant erosion in the real variables of the economy became apparent. Such a change in psychology clearly is what we are observing. The opening up of risk spreads is a very significant indication of increased risk aversion. As we know, that means in effect that commitments are being pulled back. We see in the balance sheet data that are now emerging and that Governor Ferguson was referencing a fairly pronounced weakening of cash flows in the business sector coupled with an ever-increasing difficulty of raising capital externally.

If we have a contraction in both internal and external sources of funds, the question then arises as to how the momentum will be maintained in the capital goods markets, a sector of the economy that has been an important factor in the significant expansion of economic activity in recent years. So, what we should be looking for, and indeed what is implicit in the Greenbook forecast, is a process by which the combination of increased risk aversion in the market, reflecting changed attitudes toward the future, and the effects of higher perceived risks on the balance sheets of business firms all point in a single direction. That is, they suggest a decline in capital investment. From the perspective of the way our models operate, the reason would be that the cost of capital has gone up. In terms of what actually is happening in the real world, the reason is basically that people are pulling back, and those who are not pulling back are finding it difficult to finance their activities either internally or externally.

I was mentioning in a short conversation during our coffee break that I suspect that if we had September capital appropriations data for corporations, we would see a fairly significant decline. That would be the first hard evidence in the forward data. We do not see any general weakness in the order books thus far. We do in steel where imports have caused steel industry orders to collapse, but that is a specialized industry effect and we do not yet have indications of any overall contraction in orders for equipment. But if we are at all correct in evaluating how the system is functioning, that should be on the fairly near-term horizon.

I believe that the stock market decline has had a very profound effect, and indeed one can argue that a goodly part of the increased risk aversion is itself a consequence of the collapse in stock market values. As best I can judge, that collapse is not all that much a result of a contraction in earnings expectations, at least on the part of security analysts. It clearly is far more the result of rising discount factors against those earnings in the sense of a rise in equity premiums, as least as we measure them. What that indicates is a foreshortening of forward time preferences or, looked at another way, an increase in risk aversion. So, in one sense differentiating equity markets and the credit markets is not something that is very meaningful because both very much reflect the same underlying process of pulling back.

As I indicated earlier, the approximately $3 trillion capital loss in the aggregate value of equities in the United States, most of which are held by U.S. residents, just cannot be occurring without considerable breakage of crockery somewhere. A stock market decline of the magnitude we have experienced probably was far less significant 20 or 30 years ago than it is today. This is largely because the aggregate size of stock holdings relative to income is so much higher now and so many more people have equity investments that the effects of stock market declines on economic choices is almost surely higher. Clearly, our exposure to stock market developments is much greater than it is in Europe.

In any event, I think that what we are observing is a development that is occurring at the fulcrum of a turn, for want of a better expression, in the psychology of anticipatory evaluations that will be reflected at some point in hard numbers relating to the performance of the economy itself. I think, however, that it is a mistake to expect the latter to happen very quickly. The economy's momentum in 1997 and the first quarter of 1998 and the big surge in stock market values in the first half of this year are all working their way through the income and product accounts. I would be very surprised to see that momentum disappear in the near term. I do anticipate a significant decline in capital appropriations, new orders, and contract awards. But these take time to work their way into actual purchases of capital goods and spending on projects that are under way. Therefore, a presumption that we are going to see a significant effect on capital expenditures before 1999 is probably unrealistic.

Nonetheless, it would be wrong to say that the change in psychology is all ephemeral just because we have not seen it in the hard data yet. In the forecast process, we have to look at people's value judgments. It is the change in value judgments that alters the real world. We have evidence that those value judgments are changing in a very significant way, and that is no longer a forecast. As a consequence, we are likely to see this process continue and perhaps accelerate.

I thought the evidence of fairly widespread tightening in the senior loan officers survey was quite startling in terms of its discontinuity with bank lending practices in the previous survey. We picked up indications of that at our meeting with the Federal Advisory Council several weeks ago, well before the latest loan officers' survey was conducted. What was extraordinary is how depressed that group was. None of them was saying that their loans were declining. None of them was saying that their local economies were experiencing a major contraction. But the essential conclusion is that the risks really are perceived as having increased in a way that I had not seen earlier, and that conclusion is now being solidified in the senior loan officers' survey, which is far broader and more detailed.

What we are seeing in our financial markets is essentially a mirror image of financial developments abroad, including a remarkable similarity in timing. The concurrence between developments here as measured by domestic yield spreads and the dramatic events abroad as measured by the weighted Brady stripped spreads indicates that we are not currently observing a lead/lag phenomenon. In effect, the same contagion that has so gripped the rest of the world is spilling over to our economy. We are becoming infected. This is evidenced by a widening of domestic yield spreads.

I come out of all of this with a set of conclusions or probabilistic evaluations that suggest to me that the Greenbook is essentially on the right path. But I do think that we have to be careful to recognize that yield spreads that can become dramatically adverse also can work their way back toward previous norms. We have seen several spikes in the international stripped Brady data that have involved reversals. To be sure, this one is a much more deeply seated one, and it has spilled over to the United States. However, we cannot presume that the process of deterioration is 100 percent irrevocable. That defies history. The probability of a substantial reversal at this stage is, I think, less than 50/50, but it is by no means zero. Therefore, those who have urged a degree of caution in moving the funds rate lower, in keeping with the tentative decision during our telephone conference last week to move at this meeting, have the best case as far as I am concerned.

Accordingly, I would suggest a reduction of 25 basis points in the federal funds rate and not 50 basis points. I think that there is a better argument for a tilt toward ease in that the latter has somewhat greater support in terms of the historical experience. Nonetheless, it is conceivable that we may end up viewing this action not as the first in a series of moves but as an insurance premium, as Governor Kelley pointed out. If that outcome is felt to be more likely, then the argument for symmetry is more compelling. I'm not sure the tilt is all that critical at this stage because I think events are going to drive us far more than our predispositions at this meeting. I would be less inclined to base our future actions on whatever we conclude at this stage than I would on what I might see in a newspaper, say, two weeks from today that reported on significant developments over the next couple of weeks. So, I don't think that the tilt is going to matter all that much. The reason is that in my view this economy is either going to weaken further as a consequence of the very significant shift toward greater risk aversion and very large capital losses in our equity markets or it is going to stabilize. Brazil may suddenly look better; Latin America more generally may look better; we may get a further decline in the Brady yield spreads, which we have seen in the last few days; junk issues may suddenly look a lot less uninteresting in the American market. In other words, we cannot rule out the possibility that at some point the economic outlook may look far more like the August Greenbook projections and what we discussed at the August meeting than it has in the last few weeks. My own impression is that economic conditions are eroding at this point. I do not believe we are behind the curve because I think recent economic developments are to a very large extent what we were anticipating. It is not as though there is a shock element involved.

You may remember that in Jackson Hole a number of us got together and expressed the hope that we would be able to wait until today's meeting to take whatever action was consistent with developments in our domestic economy. We did not want to be seen as rushed into action by events external to the United States and associated market forces. We felt that having to move earlier than today would clearly be seen as evidence of a central bank that was scurrying to catch up. We have succeeded in staying on schedule, if I may use that term, and hopefully we will continue to do so.

Accordingly, I am putting on the table a proposal to reduce the federal funds rate immediately by 25 basis points and a recommendation that we move to asymmetry toward ease. I would add that my preference for a tilt in that direction is a lot less strong than what I see as the desirability of a clear action to move the rate down by 25 basis points. Vice Chairman.

VICE CHAIRMAN MCDONOUGH. Mr. Chairman, I agree with your proposal to cut the fed funds rate by 25 basis points. Being the resident theologian on the meaning of "tilt," I would say that a tilt in the direction of further ease is more reflective of what the Committee thinks is likely to happen and where the risks are located. So, I, rather more strongly than you, prefer an asymmetric directive.

CHAIRMAN GREENSPAN. President Minehan.

MS. MINEHAN. Mr. Chairman, I agree with your recommendation for a 25 basis point cut. I would be more comfortable with a symmetric directive at this point simply because I think we still are not, as you point out, seeing real evidence of a slowing domestic expansion. If the reality of a rate cut, as opposed to its promise, results in calmer markets--and Don Kohn suggested that they have calmed a little in recent days--we may see a shorter rather than a longer period of market turmoil and a return to an economic situation resembling the one that we had in August. At that point, the domestic economy was still displaying a good deal of strength, and we had some concerns on the upside as well as the downside. So, I would be significantly in favor of a symmetric directive, given that I am not entirely convinced that the economy is headed down an irrevocably slippery slope. I say that despite the fact that the market turmoil is significant and the overreaction in credit markets has been much greater than we anticipated at the August meeting.

CHAIRMAN GREENSPAN. Governor Rivlin.

MS. RIVLIN. Mr. Chairman, I too agree with your recommendation of a 25 basis point reduction. In my view, a larger move is unnecessary, and it likely would be interpreted as evidence that the Fed must really be worried. I don't think we want to convey that impression. I would also concur with the proposed downward tilt in the directive despite the discussion that we had at the beginning of our meeting this morning. If we were going to announce our decision on the tilt today, I might be more inclined toward a symmetric directive. I would worry that the reaction to asymmetry might be to question why we didn't reduce the rate by 50 basis points if we are that concerned.

MR. KELLEY. Aha! [Laughter]

CHAIRMAN GREENSPAN. I'm sorry, but where do you come out given that we decided not to announce our decision on the tilt today?

MS. RIVLIN. Since we decided not to publish the tilt today, I come out in favor of a 25 basis point reduction and asymmetry toward easing.

CHAIRMAN GREENSPAN. Thank you. Governor Kelley.

MR. KELLEY. Mr. Chairman, I support your 25 basis point move, and I prefer symmetry for two reasons. First, that is what the facts of the situation call for in my judgment. Secondly, lowering the fed funds rate could well "spook" this market if such a move is combined with an asymmetric directive. The market might see the Committee as badly frightened rather than responsibly concerned. This could induce the very sequence of adverse events that policy is intended to discourage in the first place. Should evolving conditions so warrant, we can just as well move policy further from a symmetric directive.

CHAIRMAN GREENSPAN. Governor Meyer.

MR. MEYER. Mr. Chairman, I support your recommendation of a 25 basis point cut in the target federal funds rate. As I noted earlier, an easing has to be justified as a preemptive response to a significant change in the forecast. In regard to that forecast, we have changes that involve some combination of a lower central tendency for growth next year and wider downside risks. The question we face in reaching this decision is the location of the threshold where such a projected slowdown crosses the line from being benign to becoming unacceptable. There is no question in my mind that a slowdown of the dimension projected by the staff meets that test. It is a closer call from the standpoint of my less pessimistic forecast, but taking into account my sense of asymmetric downside risks, I believe an easing is clearly justified today. An easing can be viewed as either a step toward filling an expected hole in growth in 1999 and/or providing insurance against a bad draw from the unpleasantly fat tail of the probability distribution of outcomes. An easing also can be justified in terms of the minimax framework I previously suggested in relation to our March 1997 tightening. We should look at each of our options, in this case no change or an easing, and ask what would be the worst possible outcome under each option. Then, we should select the option that yields the least-worst outcome. As I balance these risks today, I am convinced that the greater danger comes from an unacceptably sharp decline in growth and that an easing is therefore justified.

The next question is the size of the move. It is useful to make a provisional judgment about the path of the funds rate in relation to the forecast. The path of the funds rate should be set so as to partially offset the projected slowing in growth in 1999. The objective is to leave growth below trend next year so as to reverse in part the prevailing tightness of the labor market and also to avoid overshooting in the year 2000 as foreign growth begins to recover. The magnitude and timing of the rate cuts in the Greenbook look about right based on the above considerations relative to the Greenbook forecast. Since my forecast is less pessimistic, I would not want to move more aggressively than the funds rate path assumed in the Greenbook. I also agree with your recommendation of an asymmetric posture toward further easing. In my view, such a posture better reflects where we are, assuming that we implement a 25 basis point move today. I would favor that posture whether or not we were to announce it today.

CHAIRMAN GREENSPAN. President Broaddus.

MR. BROADDUS. I would like to review briefly where I am coming from, Mr. Chairman. Despite the rising turbulence in the international economy over the last year or so, I have been primarily focused on the upside risks until recently. I am still focused on them at least to some extent. Until recently, I have felt that the effects of the foreign shocks were primarily two-sided in terms of their implications for GDP growth. The drag on GDP growth from reduced net exports was offset to a considerable degree in my view by lower interest rates due to the flight to quality and by downward pressure on domestic prices occasioned by the stronger dollar and lower commodity prices. With that offset in place, I tended to look through the international problems to the domestic economy where I saw very rapid growth in M2 and a high level of economic activity. That for me translated into an inflation risk. That situation clearly has changed dramatically. The huge increase in perceived risk in financial markets, if it persists, may well short-circuit the earlier, mainly favorable, impact of foreign developments on U.S. financial conditions. In this new environment, we no longer have that offset. Bob McTeer will be happy to know that I am no longer in favor of tightening monetary policy.

While the downside risk in the domestic outlook clearly is greater than it was, that alone would not be enough to persuade me that we need to ease monetary policy, at least not quite yet. I see a continuation of very strong conditions in the economy and not much evidence that they are going to weaken significantly in the near future. If there is a case for easing now, from my standpoint it would be to signal that we are not indifferent to the growing risks in world financial markets and that we are prepared to be flexible going forward as emerging developments may require. In my view, 25 basis points is a sufficient signal to get that message across. I think a 50 basis point reduction would go well beyond what is necessary.

As far as the symmetry of the directive is concerned, since I think a ¼ point reduction is going to put us a little ahead of the curve--I may be the only person in the room who feels that way but I do feel that way--I would prefer a symmetric directive.

CHAIRMAN GREENSPAN. President Jordan.

MR. JORDAN. Thank you. My position is not a lot different from that just expressed by Al Broaddus. I had been hoping for quite some time for the emergence of investor caution. Rational optimism is desirable, but investor sentiment was well beyond anything that I would have called rational optimism. Having both lenders and other investors be a little more reasoned in weighing risks is certainly desirable, but we got there too fast. It went too far, and we now are dealing with a crisis of confidence. We do not want to see a seizing up in financial markets, domestic or foreign. Foreign financial markets have seized up to a large extent. So, I am hoping that this uncertainty will dissipate rapidly and that we can turn back to a situation that is more reflective of the fundamentals. I think that any action that we take will be more symbolic--a message that may have a political component--than needed in a fundamental sense. I hope that turns out to be the case. For that reason, I think it is desirable to do the minimum that we can get away with. To do otherwise would be to ignore to our peril the rapid acceleration that we have seen in all of the money, reserve, and credit aggregates. We have to be careful about that.

As far as the symmetry is concerned, I always prefer symmetric directives. But I do not feel strongly enough about asymmetry or symmetry that I would dissent from an asymmetric directive.

CHAIRMAN GREENSPAN. President Parry.

MR. PARRY. Mr. Chairman, I support a ¼ point reduction in the funds rate. I also think the current situation may require more than one 25 basis point cut in the funds rate in the future, and therefore I would prefer a directive with asymmetry toward ease.

CHAIRMAN GREENSPAN. President Hoenig.

MR. HOENIG. Mr. Chairman, I also support a 25 basis point reduction. As to the tilt, I would much prefer no tilt for a couple of reasons. Number one, I don't think the facts today warrant it. Number two, I think you are correct in your observation that events will drive what we do next, and changing circumstances may well require a discussion at a telephone conference before a decision is made.

CHAIRMAN GREENSPAN. President Boehne.

MR. BOEHNE. A 25 basis point reduction captures my feeling. I think it is the right measure of response at this point. As far as the tilt is concerned, I'm almost indifferent about it. I believe that we are going to be so driven by events that the tilt is likely to have no substantive influence on what we do. If we had a different disclosure policy and there were an announcement effect, I think it would be worth spending more time on this question, but I am happy to go along with your recommendation.

CHAIRMAN GREENSPAN. President Poole.

MR. POOLE. I support the proposed cut of 25 basis points. I have a preference for symmetry, but I don't believe the issue is very important. In the long run what we do is what determines the outcome, although I believe that what we say can be extremely important in the short run. So, we need to be clear about our direction and our purpose. We have to emphasize that our intention is to focus on the U.S. economy not because we are unconcerned with what is going on abroad but because we have only one policy instrument. At best, we can serve one policy objective and that should be to achieve price stability or maintain low inflation in the United States. That is a very important message that we need to repeat continuously. Market expectations are very important in terms of how monetary policy exerts its effects in the short run. We have seen a large decline in interest rates in recent months. That is not just good luck. It is not just an accident. It is a consequence of the market's understanding of the Federal Reserve's objectives and what its policy is going to be in the long run. That decline in interest rates could not have occurred if the market did not believe that the incoming data were consistent with low inflation and that we would in time act to bring interest rates down as required to keep the economy in the neighborhood of full employment. So, I think that the consistent message that we send about the importance that we attach to our long-run objective of price stability is essential to having built in stabilizing effects from market fluctuations in rates.

I would like to comment briefly on the discount rate. In the long run, I would like to see the discount rate closer to the federal funds rate, but I think that this is not the time to make any such adjustment. I hope that the Board will accept a ¼ percentage point cut in the discount rate so that the change in the federal funds rate at this time will be viewed as perfectly normal and will not send any possibly confusing messages to the market.

CHAIRMAN GREENSPAN. President Moskow.

MR. MOSKOW. Mr. Chairman, I support your recommendation for a 25 basis point reduction in the fed funds rate. In my opinion, going beyond that clearly would be seen as an overreaction and some would view it as panic on our part. It is important for us to keep in mind that we are basing this policy action on projections, as you said, and we have to be somewhat humble about our record on projections.

On the tilt in the directive, I am almost indifferent. If we follow the logic of how we have been using symmetry, I would have a slight preference for asymmetry since I am assuming that there is a better than 50 percent probability that we will have to lower rates again. I hope I am wrong about that, but that is my assessment of the outlook at this point.

CHAIRMAN GREENSPAN. Governor Ferguson.

MR. FERGUSON. Thank you, Mr. Chairman. I endorse your recommendation for a decrease of 25 basis points in the federal funds target rate. As I said in my earlier statement, I think we are acting somewhat preemptively, and while I believe we should take action at this point, we should not overreact.

With respect to your policy recommendation for moving to asymmetry, I endorse that as well. Like President Moskow, I feel that further cuts are slightly more likely than not, and I think it is important to signal that at least internally. Therefore, I would move to asymmetry.

CHAIRMAN GREENSPAN. Governor Gramlich.

MR. GRAMLICH. I also support both proposals. Given all that we have discussed, I believe some rate cut is important, and I think 25 basis points is about right. I am not embarrassed about basing this policy move on the forecast. I think the forecast has it about right. We may find that we have to do more than 25 basis points, and therefore I would also support asymmetry toward easing.

CHAIRMAN GREENSPAN. President Stern.

MR. STERN. I, too, support the recommendation for a ¼ percentage point reduction in the fed funds rate. It seems to me that that is the prudent thing to do given the risks as I perceive them. I view such a policy adjustment mainly as on the margin of our effort to insulate the domestic economy from the series of negative developments that has engulfed the world in recent months.

As far as symmetry and asymmetry are concerned, as I have commented before, I have a long-standing preference for symmetry most of the time. This is one of those times, mainly for the reasons you cited, Mr. Chairman. I think events will determine what happens and I do not feel that asymmetry buys us very much in this setting.

CHAIRMAN GREENSPAN. President McTeer.

MR. MCTEER. Mr. Chairman, I think I have done my colleagues a real service today in suggesting that we may be behind the curve. I gave them all a chance to say we were not, and an opportunity to vote to ease monetary policy while still sounding hawkish! [Laughter] Just to clarify my views on that--

CHAIRMAN GREENSPAN. I don't think you need to! [Laughter]

MR. MCTEER. I'm willing to quit! I do not believe we are behind the curve on the real economy. On the other hand, I do think that had we lowered the fed funds target by ¼ percentage point prior to the Jackson Hole conference, we might have avoided some of the financial market turmoil that we have seen since then. But starting from here and now, I would just point out that at 5¼ percent the federal funds target rate will still be above 30-year bond rates. The yield curve will remain inverted. As the earnings reports for the third quarter come in below current expectations, I think that having a lower interest rate at that point and a lower discount factor would help cushion some of the further stock market deterioration. If you wanted to approve a larger reduction and make it look mild and involving all deliberate speed, you could put periods rather than exclamation points in the announcement! But I realize that I'm not going to win this argument, so I defer to your better judgment, Mr. Chairman, and that of all my colleagues on that.

I don't care much about the tilt either, but going back to my earlier comment, our discussion today does illustrate how convenient it would be not to have to vote on the tilt and therefore not to have to announce a decision on the tilt. We would still know how we feel without having to take the risk of publicizing it.

CHAIRMAN GREENSPAN. President Guynn.

MR. GUYNN. Mr. Chairman, I agree with the proposed 25 basis point easing move and I would prefer no tilt for the reasons that you articulated with regard to that choice and that Gary Stern reinforced in his comments. Thank you.

CHAIRMAN GREENSPAN. There is unanimity for a 25 basis point reduction and the smallest of majorities for asymmetry. So, will you read the directive accordingly.

MR. BERNARD. I will be reading from page 14 of the Bluebook: "In the implementation of policy for the immediate future, the Committee seeks conditions in reserve markets consistent with decreasing the federal funds rate to an average of around 5¼ percent. In the context of the Committee's long-run objectives for price stability and sustainable economic growth, and giving careful consideration to economic, financial, and monetary developments, a slightly higher federal funds rate might or a somewhat lower federal funds rate would be acceptable in the intermeeting period. The contemplated reserve conditions are expected to be consistent with some moderation in the growth in M2 and M3 over coming months."

CHAIRMAN GREENSPAN. Call the roll.

MR. BERNARD.

Chairman Greenspan	Yes
Vice Chairman McDonough	Yes
Governor Ferguson	Yes
Governor Gramlich	Yes
President Hoenig	Yes
President Jordan	Yes
Governor Kelley	Yes
Governor Meyer	Yes
President Minehan	Yes
President Poole	Yes
Governor Rivlin	Yes

CHAIRMAN GREENSPAN. Our next meeting will be on Tuesday, November 17. We will now go into a short recess for lunch. When we resume our meeting, Bill McDonough will report on what has been going on with Long-Term Capital Management.

[Recess]

CHAIRMAN GREENSPAN. I have the draft of a press release, which I will ask Don Kohn to read.

MR. KOHN. It reads as follows: "The Federal Open Market Committee decided today to ease the stance of monetary policy slightly, expecting the federal funds rate to decline ¼ percentage point to around 5¼ percent. The action was taken to cushion the effects on prospective economic growth in the United States of increasing weakness in foreign economies and of less accommodative financial conditions domestically. The recent changes in the global economy and adjustments in U.S. financial markets mean that a slightly lower federal funds rate should now be consistent with keeping inflation low and sustaining economic growth going forward.

The discount rate remains unchanged at 5 percent."

MS. MINEHAN. Sounds good.

CHAIRMAN GREENSPAN. Vice Chair, do you wish to comment?

VICE CHAIRMAN MCDONOUGH. Yes, Mr. Chairman. I want to give the Committee members some background about the involvement of the Federal Reserve Bank of New York in helping a number of private sector financial institutions arrive at a decision to inject capital into Long-Term Capital Portfolio (LTCP). Long-Term Capital Management (LTCM), a hedge fund management company established in 1994, created a set of funds that collectively are called Long-Term Capital Portfolio. The founder was John Meriwether. His senior colleagues are David Mullins, formerly of this Board, and two Nobel Prize winning economists/ mathematicians, Bob Merton and Myron Scholes, plus some others, most of whom were recruited from Salomon Brothers where Meriwether had worked before.

They were quite successful in 1994 and very successful in 1995 and 1996. In each of those two years they returned to their investors over 40 percent of their initial investments after the deduction of very considerable fees by the management company. All their investors were either firms or high net worth individuals who invested a minimum of $10 million. During this period, the fund's performance exhibited a very low level of volatility. They were consistently successful, and, not surprisingly, they apparently began to believe very firmly in their ability to continue to be successful. They did not take essentially one-sided bets on transactions. Rather, they were speculating on spreads of the kind that Peter Fisher described earlier, and over time they also went into spreads on equities as well as fixed-income instruments. In 1997, they were somewhat less successful. If I remember correctly, they had a return of about 17 percent. At the end of the year, they decided that market opportunities were not as great as in previous years and that they could not profitably use as much capital as they had previously, so they returned about $2.8 billion to their investors. The year 1998 has been considerably less successful; by the end of August, they had lost 52 percent of the capital that they had at the start of the year. During August, LTCM officials approached some very prestigious financial firms in New York to see if additional investors could be brought in. On Wednesday, September 2, Meriwether sent a letter to the investors of LTCP. Knowledge of that letter became quite widely spread. Meriwether reported the losses, but he also expressed a great deal of confidence. He said in his letter that he thought there were investment opportunities and he encouraged his existing investors to invest more. At the same time, as I mentioned, he was seeking new investors, both directly and through some securities firms.

Meriwether and Mullins informed me on September 15 that they had to raise a significant amount of additional capital--about $1 to $1-1/2 billion--in order to support the risk positions of LTCP and have the staying power that they needed. Two days later, they informed our Bank that they had been unsuccessful in that regard. That is, they were not able to raise the money directly or through the securities firms they were using.

You may remember that the markets were very turbulent on September 18. In such situations I make an effort, as did all my predecessors in this job, to talk to the heads of the major banks and securities firms in New York. My purpose is to get a feel for two things--what they think is going on in the markets and how their own firm is doing. Early in the day I had heard from Messrs. Meriwether and Mullins who told me that their losses were continuing. I thanked them for the information. It was fascinating to me that every head of the 8 to 10 firms that I talked to subsequently during the day brought up the problems of LTCM/P independently of anything that I said. They gave particular emphasis to what in their view would be the very serious problems that a failure of that firm would create in financial markets. They were not talking particularly about the problems that such a failure would cause for their own firms but rather about the problems that it would cause for the financial markets in general.

The reason those problems could arise is that LTCM, because of its previous success, was able to take positions with its counterparties in the market that essentially involved creditors lending to them with no initial margin. That is, if LTCP were financing a position of 100, their creditors would lend them 100. So, LTCP did not have any limitation on the size of its positions based on the need for an initial margin. The result was that the firm's positions in a variety of instruments around the world were very large. What my contacts were talking about was the effect that the failure of the firm would have on world markets if all these positions had to be dumped on the markets. People who thought they had an offsetting position with LTCP would suddenly find that they did not have one. They would find themselves with big open positions that they had to worry about.

Late in the day on September 18, a major securities firm that had been very involved in trying to find equity investors for LTCP informed me that they had asked LTCM if they, the securities firm, could share with the Federal Reserve their knowledge of the positions and condition of Long-Term Capital Portfolio. Long-Term Capital Management said that they would rather explain their situation to us directly. I agreed on Saturday, September 19, that Peter Fisher would lead a group of people to visit the firm in Greenwich on Sunday. To make a long story somewhat shorter, he and his group, which included Dino Kos and some others, were joined by Mr. Gensler of the U.S. Treasury. At that point I was in an awkward position because, wearing my supervisor hat, I had to go to London to give a speech and hold a press conference. The nature of my position is such that if I did not make my scheduled speech at a time when rumors were circulating in New York about a number of securities firms--not just LTCP--market participants might conclude that a firm was about to fail. That was not a signal that I wanted to give.

Fortunately, my distinguished colleague, Mr. Fisher, could remain in New York and set up a team. He did a lot of the dealing with LTCM. He and I engaged in lengthy discussions, and we shared the view that the collapse of Long-Term Capital Portfolio would create chaotic financial markets around the world and that nobody could make a good estimate of what the likely damage would be. By this time we knew that view was shared by Goldman Sachs, Merrill Lynch, JP Morgan, and shortly after, UBS. To go back to some conversations that we had earlier today, it was our view that the effect of the firm's failure would be to depress equity markets and to create widening spreads in fixed-income markets. What the downside effect of that would be on many economies, including that of the United States, could not be easily ascertained. It also became clear that even though LTCM had been working with at least the four firms that I mentioned, they had not been able to establish enough of an identity of interests to make it possible for the private investors to get the interested parties together. These were deemed by this time to be approximately 17 financial institutions around the world that had very large counterparty positions with LTCP.

We essentially saw only two likely scenarios since we were convinced that the private sector group could not get itself in a room to work out a possible solution. Either there would be a failure of LTCP or the Federal Reserve Bank of New York would play its traditional role in this type of situation. We knew that our intervention would put the prestige of the Bank on the line; put the Federal Reserve, of which it is a part, in the morning newspaper; and put the personal reputation and prestige of the President of the Bank who made the decision on the line. As I saw it, our intervention was preferable to letting the firm collapse in the belief that we were good at damage control. So, I made the decision that we had to play that role, working through Peter Fisher for a good portion of its implementation.

Peter held a series of meetings, but the climactic meeting occurred last Wednesday at which 15 firms were represented. I began the meeting by explaining that if it was possible for the private sector firms to reach a decision in their interest--one that was freely arrived at by them because there would be no public money involved--that would be in the best interests of markets in general and of the people who depend on markets. At the end of the day, the private sector firms reached a conclusion after a very long struggle. We stayed out of the fray, but it was perfectly clear in light of the fact that we were present--I was in the room; Peter was in the room; the chairman of the New York Stock Exchange was in the room--that we had an interest in their coming to a conclusion. The conclusion reached, including all the terms and the conditions, was theirs, not ours. It was not suggested by us; it was not guided by us.

In a subsequent series of meetings, the details were finally worked out with some difficulty. Late in the afternoon on Friday, I was asked by the person presiding over the private sector group if the Federal Reserve Bank of New York would "authorize a meeting of the seniors," that is, the people who had been in our board room on Wednesday, or invite them to the meeting, or attend the meeting, or ask Peter Fisher to attend the meeting. I said "None of the above. We got you folks to a point where you could all be in the room and where you could find it possible to arrive at a decision. But if there still are difficulties in your closing the deal, you have to resolve them." The problem with our convening the meeting and sitting there glowering at people to induce them to reach an agreement is that if they were not able to solve the problem, then it would be our deal. The Federal Reserve would be excessively, inappropriately, and unwisely involved.

So, the involvement of the Federal Reserve Bank of New York was essentially to bring the parties together because we agreed with the heads of four of the major securities firms in the world that a failure of LTCP would bring chaotic market conditions, with immeasurable and essentially inestimable damage to economies around the world. That was a sufficiently great danger that we believed we should use the premises and the good offices of the Federal Reserve Bank of New York to bring people together so they would have an opportunity to reach a conclusion.

Peter Fisher can answer any number of questions you might have on the details, but my summary is essentially the story regarding the Federal Reserve's involvement. We put the name of the Federal Reserve Bank of New York on the line, and of course it is part of the Federal Reserve System. I put on the line my personal prestige of being in that business most of my life and therefore being considered by the other participants in the room as having a knowledge of these things. I believe we did the right thing, but I certainly understand why others could say we went a little too close to the edge or we went over the edge. Thank you, Mr. Chairman.

CHAIRMAN GREENSPAN. Bill, did those in the room think that their own firms would benefit from an agreement, or were they looking solely at the macroeconomic effects of being good citizens?

VICE CHAIRMAN MCDONOUGH. They were looking at both in my view. There was a good deal of concern about the macroeconomic effects. There also was a belief or assumption that if the LTCP collapsed, spreads would widen out, it would be very difficult to mark positions to market, and there could be some chaos for a week or two where it would be very difficult for markets to function. During that period, certainly, the mark-to-market losses for the firms would be moving in all directions. Therefore, there is no question in my view that they thought they would be better off if there were a solution. They get paid for making that kind of judgment in the interest of their shareholders. There also was quite a lot of discussion, which sounded rather sincere, that they as the "seniors" of the financial services business in New York had a responsibility to the financial system. But were they also strongly motivated by the best interests of their firm? Without question.

CHAIRMAN GREENSPAN. Could you go back and tell us what you know about the position of our bank examiners regarding the practices, which I think you described as less than optimal, that were followed by the institutional lenders to LTCP?

VICE CHAIRMAN MCDONOUGH. Richard Spillenkothen might be able to pick this up better. A staff group from the Board of Governors and the New York Reserve Bank made a number of visits last December to the major banks, both national banks and state member banks, and put out a memorandum on the subject in April.

MR. SPILLENKOTHEN. I should probably point out that this was not an on-site examination. Our staffs met with the managements of these institutions. I think they came away with a feeling that, generally speaking, the banks were saying the right things in terms of the kinds of risk management processes they had in place. The bankers talked a lot about how their involvement with hedge funds was becoming a bigger part of their overall business activities, and they noted that they actually had staff who managed their relationships with the big hedge funds because of the nature of the business. I gathered that the bankers were indicating that they had the policies and procedures in place to deal in a fairly effective way with the risks that generally were involved.

In terms of this situation, I think that the issues either then or going forward are threefold. One is the extent to which the banks actually are applying these risk management policies in the course of their activities. That application of policies has to be looked at in the context of the examination process. We indicated in the memorandum, as Bill McDonough mentioned, that this was an area that we needed to continue to focus on in the course of the examination process. Secondly, in terms of the issues here, I think the robustness with which the banks applied their own policies was adversely affected by their perception of the reputation of the people who ran LTCM/P. The final point is that in terms of lessons learned, a lot of the focus here has to be on collateral and collateral management. One thing that this experience has underscored--and actually we have known this for some time--is that collateral is only one aspect of the overall control of credit risk, but it is not a replacement for the banks' analysis of the overall creditworthiness of the borrower.

At this point, we think the banks had the right policies and procedures in place. The question is how effectively the banks were implementing those policies and procedures. We have people visiting the three major state member banks today, and tomorrow they will be at Salomon, to talk about the overall exposure of these institutions to hedge funds, their exposure to LTCM, the extent to which they actually are following the policies that they said they had in place, and whether they treated LTCM differently from other hedge funds for whatever reasons. I think the basic answer is that we were reasonably comfortable that they had the policies in place, but the question is how effectively the banks were actually implementing them in the case of this particular institution. We still have to look into that.

CHAIRMAN GREENSPAN. When we conduct our examinations, I know that we check to see whether bank policies are being implemented, but how did we do that with respect to, say, Morgan and LTCM? Did we actually evaluate the loan portfolio that represented Morgan's claims against LTCM/P to see whether, in fact, Morgan abided by the principles that you just outlined?

MR. SPILLENKOTHEN. We typically do some transactions testing to see if banks are carrying out their policies with respect to counterparties. Actually, the Bankers Trust and Morgan exams are now under way. Just before I came to this meeting, I looked at the previous examination, and there was no mention of LTCM in it. But that firm grew rapidly, and the banks may have had a fairly modest amount of exposure at the time of the previous examination. At this point, I cannot say whether we looked at the particular relationship you mentioned, but we do look at and test to see whether a bank's policies are being implemented. We do not do that for every counterparty by any means. We do a spot check.

VICE CHAIRMAN MCDONOUGH. Rich, it could well be that, with the rapid growth of LTCP and the increasing involvement of banks in dealing with hedge funds, the banks may not even have been dealing with LTCP at the time of the previous exam.

MR. SPILLENKOTHEN. Yes, that previous exam probably would have been as of the middle of 1997. That exam would have been over a year old. That's a question we have to go back and take a look at.

CHAIRMAN GREENSPAN. Where we are most vulnerable is with regard to the adequacy of our examinations.

We rarely come up against a situation where we say this is awful, the institution is falling apart, and we did not spot the deterioration. For example, when we looked into the Japanese operation in New York in which the embezzlement occurred--

SEVERAL. Daiwa.

CHAIRMAN GREENSPAN. Daiwa, yes. What Daiwa exposed is how complex these situations are and how few troops we have to look into them.

if we had to meet the standards that people think exist, we would have five times as many examiners

We would examine them to death, and they would not have any breathing room.

What we need at this stage is some sense of whether we are examining very specifically what actually happened in the LTCM situation. When I was in the private sector, I remember looking at the details of particular loans that were shown to bank directors. I was on the loan committee of one of these major banking institutions, and we actually went through the loan portfolio major client by major client. The bank's senior loan officers would provide a basic review. They would take the loan portfolio and point to the vulnerabilities and strengths of the borrowers and give their evaluations of the risks that were involved. The review was quite thorough. I knew that I was getting a bit of a snow job--the type of thing where mistakes never are made and everything is perfect. But even adjusting for that, the examination was at a level that would not have allowed this LTCP problem to happen. But it did happen and a number of extraordinarily effective counterparties were involved. The question is why it happened in this case. Is it just that the lenders were dazzled by the people at LTCM and did not take a close look?

VICE CHAIRMAN MCDONOUGH. I think there was in place a credit management system that appeared to make a great deal of sense.

CHAIRMAN GREENSPAN. Whose? LTCM's?

VICE CHAIRMAN MCDONOUGH. No, the lenders, including the institution with which you were once associated. One may question the notion that at least for some lenders there was no initial margin requirement. Beyond that issue, it should be emphasized that the lenders had very good collateral management systems so that if the LTCP began to lose on a position, it would need to put added collateral in place. What we have to get our hands around conceptually is whether there was something that we missed that could have provided us with some notion of just how big the overall position of LTCP had become. I don't know how we could have done that. We do not regulate that firm. But given the number of institutions they dealt with around the world, was there a way that should have enabled us to be more aware of their overall position? One is inclined to say, "you bet." But exactly how we could have done that I am not so sure.

CHAIRMAN GREENSPAN. Somebody mentioned to me that Bankers Trust had an August balance sheet for LTCM. Is that true?

VICE CHAIRMAN MCDONOUGH. Yes, but the balance sheet is a relatively small piece of the whole action because so much of the latter is off-balance-sheet.

MR. FISHER. I don't think they had an August balance sheet on September 1.

VICE CHAIRMAN MCDONOUGH. They may have one now.

MR. FISHER. They may have had one during the weekend, eight days ago. I don't think anyone had seen one before the weekend of September 19 and 20.

CHAIRMAN GREENSPAN. It is one thing for one bank to have failed to appreciate what was happening to LTCP, but this list of institutions is just mind boggling.

VICE CHAIRMAN MCDONOUGH. This tells us that there was something in the way that the financial services institutions as a group were dealing with at least this firm that allowed a position to be built up that was very dangerous.

CHAIRMAN GREENSPAN. What type of collateral would ordinarily be required on this type of loan?

MR. FISHER. Let me try to answer your line of inquiry, Mr. Chairman, with a hypothesis. I want to be very clear that this is just a hypothesis. On August 31, the firm has a $125 billion balance sheet against $2.8 billion of capital, which they have lost. Essentially, $125 billion of assets are out under repo. There are no assets in the firm. One kind of transaction they are doing with their counterparties is a repo transaction.

CHAIRMAN GREENSPAN. Involving U.S. Treasuries?

MR. FISHER. U.S. Treasuries, Danish government bonds, BBB credits--you name it.

CHAIRMAN GREENSPAN. There are not a lot of triple Bs outstanding.

MR. FISHER. There is a fair amount of government credit in these assets, but there are a lot of other assets also. Swap agreements are their instrument of choice, and that is how they got to a $1.45 trillion off-balance-sheet position on August 31. By the time we were looking at that position during the weekend eight days ago, the firm clearly had lost a lot of capital. Other firms that looked at their position in greater detail than we were able to thought the off-balance-sheet had shrunk to around one trillion dollars by the third week of September. The balance sheet leverage ratio was 55 to 1 by the time we looked. The off-balance-sheet leverage was 100 to 1 or 200 to 1--I don't know how to calculate it. Let me try to explain by way of a hypothesis.

A counterparty looking at LTCP and contemplating secured financings involving repo transactions and a lot of total-rate-of-return swaps and other swap transactions might decide not to take any initial margin. The counterparty would consider itself secure because it had taken five years of data and seen what the daily and two-day price moves can be. It would be managing its risk exposure on the basis of the same five years of data that the experts at LTCM were using and had concluded that not all the correlations would go to one. Both counterparties would be using risk management systems--this is now a hypothesis--where they have become increasingly comfortable with zero initial margin because the daily cash flow is enough to let them think they only have a 1-day move to consider. That is, when they look at five years of data and a potential 1-day move on that basis, they conclude that they can handle that 1-day risk. On the basis of that same five years of data, the partners inside LTCM have persuaded themselves that the correlations will never go to one between Japanese, German, and U.S. government bonds. They are making the assumption that they will have a globally diversified portfolio. That in part is how the counterparties also get comfortable with zero initial margin. But from the System's point of view, zero initial margin permits an essentially unlimited amount of leverage. There is no constraint other than exhaustion on the part of counterparties.

VICE CHAIRMAN MCDONOUGH. The biblical justice in this situation is that the principals of LTCM apparently believed so firmly that this system would continue to work that they appear to have borrowed rather heavily to increase their own risk positions in their firm. So, there is a general and spreading belief that we may have some extraordinarily elegant people in private bankruptcy court in the fairly near future.

MS. RIVLIN. How many more LTCMs are there?

VICE CHAIRMAN MCDONOUGH. We do not know of any other hedge fund that would be remotely of the size of LTCM/P. If John Meriwether can do it, there certainly would have to be other smart individuals with computers who could engage in the same sort of activity. So, there have to be little versions of LTCM/P. Most of the other very well known hedge funds operate much more in the direction of one-way bets. They can lose $2 billion in Russia, and one can say that is a shame. Well, it is a shame for them but not of much concern for anybody else.

MR. MEYER. As we get under way with our F-6 study of systemic risk, I think this is an important episode for us to study. We are trying to decide what is systemic risk and what is not--where we can draw the line. I think we need some further analysis of this episode to help us decide whether this was an appropriate involvement of the Federal Reserve. There will always be a matter of judgment involved, but this certainly was a close call. We need to think about that. Secondly, we have the supervisory issue. I think we are going to be called on to explain whether or not our examinations and other sources of information provided us with what we needed to know.

There also is an issue that I would be remiss not to at least mention, namely that of overseeing how these lending and investment decisions get made. Rather well along in this process, I was getting telephone calls from reporters who knew more about LTCM than I did. I don't think that was the way it should have been.

CHAIRMAN GREENSPAN. Let me go back. Can you explain to me how, if everybody is 100 percent collateralized--not 110 but 100 percent--we can end up with these huge losses for lenders?

VICE CHAIRMAN MCDONOUGH. The lenders continue to be collateralized as the firm starts to lose money but only so long as the firm has capital to continue to provide added collateral to make up for the losses. As the losses continue to mount, the firm at some point--

CHAIRMAN GREENSPAN. But, are we looking at losses in the value of the collateral or is collateral being withdrawn? If I am a bank lender and I lend $200 million to a hedge fund, ordinarily I would be over-collateralized. I would hold more than $200 million in, say, U.S. Treasury bills.

VICE CHAIRMAN MCDONOUGH. Remember, on day one there was no initial margin.

CHAIRMAN GREENSPAN. I am talking about my position as a bank lending to LTCM.

VICE CHAIRMAN MCDONOUGH. You made the loan but since there was no initial margin, there was no collateral.

MR. TRUMAN. There is collateral but no margin.

MR. FISHER. If I lend $100 to LTCP they give me an asset worth $100. If the market value of that asset goes up 5 percent today, I give them back $5 dollars; if it goes down 5 percent tomorrow they give me $5 dollars.

CHAIRMAN GREENSPAN. That is a 100 percent collateralized mark-to-market position.

MR. FISHER. Right.

CHAIRMAN GREENSPAN. Now, in order for me as a bank to lose in this situation, I either have to find that the collateral I have is not legally available under certain circumstances or its market value has declined. Which was it in this case?

MR. FISHER. It was the latter. The collateral lost market value.

CHAIRMAN GREENSPAN. So, the collateral lost value and LTCP did not have the resources to make up for the loss.

VICE CHAIRMAN MCDONOUGH. That's right.

MR. FISHER. I want to be clear, Mr. Chairman. We are talking about a balance sheet of $125 billion and an off-balance-sheet of $1.4 trillion. Now, we know the total was not all collateralized at 100 cents on the dollar. It was only the balance sheet financing that was fully collateralized.

CHAIRMAN GREENSPAN. Let's leave the derivatives out.

MR. FISHER. I realize it is notional, but we do not know how to scale the notionals.

MR. TRUMAN. The off-balance-sheet presumably goes the same way as the balance sheet.

CHAIRMAN GREENSPAN. There are two ways of coming at this. There are certain transactions between counterparties in derivatives where net positions are fully collateralized or up to X percent and in some cases there is no collateral at all. Straight lending usually is fully collateralized. I don't know what bankers are going to write off on these losses, but what I'm trying to get at is where the losses to the banks are coming from. Are we looking at uncollateralized derivative positions that went against LTCP and in favor of a bank, which theoretically has a net position of $20 million but discovers that it really has a $20 million credit problem? In other words, where are the losses coming from as best we can see?

MR. SPILLENKOTHEN. Initially, these transactions in derivatives were in a sense unsecured. Once the exposure reached a certain point, then the lender, the bank, had the right to demand collateral to cover that. That is, when the mark-to-market position and the current exposure built up to a certain point, then the banks asked for the collateral. According to the numbers we have now, it appears that the mark-to-market positions of these big institutions are largely covered by collateral. So, it does not seem that there is much loss in their current mark-to-market positions and other derivatives positions. One of the problems is the potential future exposure. I am going to say this in English. If markets keep moving away from them in the wrong direction, their future exposure could be very large and they might not have the collateral at that point in time to cover that exposure.

CHAIRMAN GREENSPAN. That is a different issue. As far as bookkeeping is concerned, banks do not book those anticipatory losses unless some real commitments are involved. What I am trying to focus on is where the losses are coming from.

MR. FISHER. Let me try to work through some of the sources of the losses that were discussed. Long-Term Capital Management did an analysis of its top 17 counterparties on just 12 trades. These represented a very small percent of the hundreds of trades that they had on their books, but they were their big trades. For example, 2 of these 12 had losses of $1/2 billion over a period of 30 days; there were some offsets involving very complicated transactions. The scenario that LTCM worked out attempted to take into account negative movements in each of the asset markets. That is, if the market moved against the position in the direction where liquidation was likely to occur, there would be an acceleration of the losses. But neither the people at LTCM nor I nor others who looked at this thought a meltdown scenario was involved. The losses actually were the result of discrete bad days in each of these markets. They had generated a counterparty loss of $2.8 billion that was spread among the top 17 lenders. That was at a time when the net asset value of the collateral was about $1 billion or $1 billion plus, so there were $1-1/2 billion or so of losses to be shared among the top counterparties. I think a number of us who eyeballed that analysis thought that it was one thing to focus on just the trades in question; but if all the trades of those firms were included, this direct loss could rise to $3 to $5 billion. That was a number that the other firms that were actively looking at the numbers also thought was a plausible forecast of a liquidation scenario involving just the top 17 lenders.

VICE CHAIRMAN MCDONOUGH. I suggest that what would be valuable for the Committee, for all of us, would be to make certain assumptions about market developments and then see what the bookkeeping effects would be. How does firm X suffer a loss because of its relationship with LTCP? This gets us into very sophisticated accounting and complex analyses of losses. I think we are all trying to make estimates on the fly, but that is not going to give a very accurate description of how it really works.

CHAIRMAN GREENSPAN. What I think we are going to need for our testimony on Thursday is a general summary of what we do as examiners, how often we do it, and why banks with a huge amount of experience in lending got caught in this kind of thing. We need an answer. The answer is not that it should not have happened. Part of banking involves losing money. Banks never make a loan that they do not expect to be repaid. In that sense, every loss is an error. The issue is to define the error.

VICE CHAIRMAN MCDONOUGH. I agree that we are going to need that information for our testimony, which is being prepared by some of the people who are sitting at the end of this table.

CHAIRMAN GREENSPAN. If we indicate what we are doing to find the answers, that is fine. This to me is where the issue of the responsiveness of the Federal Reserve is going to be.

VICE CHAIRMAN MCDONOUGH. I assume that one of the things we will want to talk about is the fact that we had staff, other than those who were conducting examinations, who were meeting with the management people to examine the nature of their dealing with hedge funds. In their report, the staff mentioned LTCM/P as one of the customers of some of the institutions. What did we learn there? What might we have learned in addition? It is not as if we were asleep. I think that as we write the testimony, which already is in process, we will have a story. The only fully convincing story is that the problem did not happen, and we know that is not the case. [Laughter]

CHAIRMAN GREENSPAN. All I care about is that we produce accurate testimony.

MS. RIVLIN. I agree.

MR. FISHER. I would like to offer one final perspective on the numbers that I discussed. One of the surprises for people who went to look at LTCP's position, myself included, was the tremendous size of their equity and equity volatility positions. People knew they were dabbling in that sector of the markets, but everyone including a lot of the press had thought of LTCP as a fixed-income shop. Some of the firms who looked at LTCP's position in more detail than I, who had the weekend to investigate, felt that the preponderance of the exposure, if one uses the $3 to $5 billion number, that needed to be stabilized was the equity position and the equity volatility position. That's in trades with LTCP in total-rate-of-return swaps. A lesser part of the losses was in the fixed-income financing area. So, the bigger risk was this huge equity volatility position that LTCP had taken on.

VICE CHAIRMAN MCDONOUGH. One of the things that we have to be able to say to Congress is whether the state-chartered banks that we supervise participated in the equity piece or not. I do not know the answer at this point.

CHAIRMAN GREENSPAN. Have we developed a series of questions for the testimony that we are asking ourselves? I think that would be very useful. In other words, in the testimony we should identify the questions to which we do not yet know the answer.

VICE CHAIRMAN MCDONOUGH. We will say what we know, and then we will say what we do not know and are trying to find out.

CHAIRMAN GREENSPAN. It has to be a full report on what we know and do not know.

MR. FERGUSON. Two questions come to my mind. One relates to reports that some of the institutions were not just lenders but also investors. Those, I presume, mainly have been investment banks. Do we think there also are some section 20s or others that may have been involved?

VICE CHAIRMAN MCDONOUGH. There was a foreign bank, UBS, that was a large investor and its investment accounted for a good chunk of the loss that the bank announced last Thursday.

CHAIRMAN GREENSPAN. Did they participate through an American affiliate or directly from Switzerland?

VICE CHAIRMAN MCDONOUGH. We think it was Switzerland, but that is again a fact that we have to establish. It also has now been reported in the press that some senior officers of the securities firms, we think not of the banks, were involved as individuals either through a retained earnings fund for senior executives at their institutions or directly as investors in Long-Term Capital Management.

MR. FERGUSON. My other question is one that I also ask to make sure that we will have an answer. It involves an issue that is similar to the one that Larry Meyer was raising. Does this experience in any sense bring into question the approach we are taking with respect to risk-based supervision? To some extent, it involves what we do and when we do it. We need to figure out how that approach might have to be adjusted based on this experience.

VICE CHAIRMAN MCDONOUGH. This tells you that the move toward risk-based supervision is the right way to be going.

MS. RIVLIN. If you do it right! [Laughter]

VICE CHAIRMAN MCDONOUGH. We should try to get enough facts to make sure that they are doing what they say they are doing. That is what is needed to give an intelligent answer to the question. If I sound a little anxious, it is because the people who should be writing the testimony are here involved in this discussion, including me. Much as I want to share all of this with you, we have to be sitting down before Mr. Leach at 10:00 a.m. on Thursday morning. There's a lot of work to be done before then.

CHAIRMAN GREENSPAN. I would like to ask one quick factual question of our legal counsel. Virgil, you raised an issue with respect to whether in fact a particular group of new investors in LTCM were investing in violation of the 5 percent equity cap. What have you concluded, if anything, on that question?

MR. MATTINGLY. I do not know what has happened, but I suspect that fund has gotten rid of everything over 5 percent.

CHAIRMAN GREENSPAN. So, it is in compliance with the Bank Holding Company Act?

MR. MATTINGLY. Nobody has told us, but I read in the paper that they have been dumping equities, so I assume that they are trying to get down below 5 percent.

CHAIRMAN GREENSPAN. Ah! That explains it!

MR. MATTINGLY. Mr. Chairman, some of the banks can take an equity position in LTCM in satisfaction of a previously contracted debt, but some of the foreign banks may have reached the 5 percent limit of the Bank Holding Company Act.

CHAIRMAN GREENSPAN. Governor Gramlich.

MR. GRAMLICH. Just to follow up on Alice's question, tell me again how we know that there are not a lot more large hedge funds like LTCP out there, accidents waiting to happen.

VICE CHAIRMAN MCDONOUGH. How do we know? We do not know.

MR. GRAMLICH. We do not know!

VICE CHAIRMAN MCDONOUGH. We have our usual antennae out. That is how we learned from a variety of sources that LTCM/P was getting into trouble. We can surmise on the basis of what has happened to spreads that, although they may get worse, anybody who had an opportunity to get into trouble certainly had a tremendous opportunity. If nothing else, one would think that the rumor mill would have brought to our attention that firm X was having difficulties. We hear all kinds of rumors in the financial markets, but we have not heard of a hedge fund that would appear to be remotely of the size and macroeconomic risk potential of a LTCM/P.

MR. FISHER. It was something of a signature for this firm to insist that if a counterparty wanted to deal with them, there would be no initial margin. Not many other firms have gotten away with that.

MR. GRAMLICH. It goes to your bedazzlement effect.

MS. MINEHAN. I might mention something that we found out that came as a bit of a surprise, namely that some of the loans made by some of the large lenders were participated out. So, we see shares in banks in our District of both collateralized and uncollateralized lines to LTCM/P.

VICE CHAIRMAN MCDONOUGH. I think there were two major credit lines, one of which was drawn down. It was a $900 million line of which slightly under $500 million was drawn down and participated out. I think, however, that most of the transactions we have been talking about here involve counterparties rather than syndications.

MS. MINEHAN. I realize that but there were at least two syndicated pools.

VICE CHAIRMAN MCDONOUGH. Yes, one to the management company and one to the partnership.

MS. MINEHAN. I was wondering whether any of this showed up in the review of shared national credits last year.

MR. SPILLENKOTHEN. As I recall, the credit was $700 million. It was $500 million initially, but it subsequently was increased.

MR. PARRY. Did this program produce a default of any loan?

MR. SPILLENKOTHEN. No.

MR. PARRY. Then how can the investments be a part of DPC [debt previously contracted], Virgil?

MR. MATTINGLY. They were anticipating that the market would move and that they would lose their position. The DPC exemption does not require an actual default. The exemption is also available in anticipation of a default.

MR. STERN. Another form of collateral!

MR. SPILLENKOTHEN. It looks as though their current positions are covered by collateral, but the issue is potential future exposure in these markets. I have to pin these numbers down, but from the numbers I've seen, it looks as though they did a pretty good job of getting collateral to cover their mark-to-market positions. But the potential future exposures seem rather large, and if they were to materialize under these market conditions one has to wonder where any collateral would come from in the future. That is part of the problem.

MR. PARKINSON. I would like to draw an analogy. As you may know, we use the VAR model to measure market risk. The danger is that this analysis does not cover potential losses in extremely volatile situations. In those markets we have to do stress testing to uncover what exposures are there. The same distinction is important here, and I think it lies at the heart of the problem. LTCM is using a VAR-type model, the same basic technology as our VAR, to measure potential future exposure. But that model estimates exposure in normal markets on the basis of one-day movements, perhaps at a 95 percent confidence level. It does not deal with the kind of markets we are seeing today. The latter are extremely volatile and currently very illiquid. For example, Peter Fisher talked about equity option positions. Now, suppose investors have to close those positions out and try to replace them by going into the market. There is no liquidity whatsoever in that market. It is completely illiquid. I think this emphasis on initial margin actually is misplaced. The reason is that if investors had decided to collect initial margin, they would have collected enough margin to cover their estimate of potential future exposure. By hypothesis, they seriously underestimated that exposure, so they would be still left with a serious shortfall in their margin.

MR. FISHER. All this relates to the question of how this financing got to be so big and nobody realized it was happening.

CHAIRMAN GREENSPAN. What technically happens in that kind of model is that if we are resting on the last five years of experience during which the structure of the markets is essentially stable, that is, there were no severe contractions or even expansions, the covariances that we are going to pick up out of that five years are correct covariances for that population and that environment. What we were dealing with in the Russian situation, if we look at the data, was something that clearly was not a simple, steady state. In that environment, the coefficients in an econometric model either collapse to zero or to one. If we took the covariance matrix that would be implicit in that environment, it would give wholly different risk parameters than we would get in a system in which we are taking five years of special experience and saying the losses were never more than "x" on a daily basis. So what? That begs the question of what will happen in the future.

MS. RIVLIN. That is what stress testing is all about.

CHAIRMAN GREENSPAN. Yes, exactly.

VICE CHAIRMAN MCDONOUGH. We have to be very careful because as horrendous as this experience was, if we assume that the normal market is that the Russians are going to default once a week, the cost of capital would go so high that nobody would ever invest in anything.

CHAIRMAN GREENSPAN. That is the whole point. These are very special cases. In fact, as some of my colleagues know, my favorite speech is one where I discuss separating the risks that confront the monetary authority from the risks that the commercial banks have to face. I have always argued that the commercial banks are responsible for 99.95 percent of the risks with their own capital. The rest are these 50-year events, which the central bank will handle. The trouble is that this is what this event clearly was.

VICE CHAIRMAN MCDONOUGH. That is why this central banker was happy to call a meeting but wanted to make it absolutely clear that our money was not going to be made available.

CHAIRMAN GREENSPAN. That was very wise. Al Broaddus.

MR. BROADDUS. I didn't have a question, just a 15-second comment in the context of this Committee's broader responsibility. Bill, I would not second-guess your decision for a minute. It is the most natural thing in the world to respond to a request for our good offices in a situation like this. But this kind of action does create expectations with respect to what we might do going forward that in turn create expectations about monetary policy. So, this issue clearly is an FOMC matter in my view, and I appreciate it being brought to this Committee. The problem, of course, is that there is no time for the FOMC to deliberate a situation like this on a case-by-case basis.

CHAIRMAN GREENSPAN. It is not something a committee can do.

MR. BROADDUS. Right. Against that background, it might be constructive for us to have a discussion at some point in which we would explicitly address the tradeoff and how we balance the need to intervene in a crisis.

CHAIRMAN GREENSPAN. That is Larry Meyer's committee, I presume.

MR. BROADDUS. Well, if we could do that, it would give us some sense of how we as a group view the tradeoff. So I think that would be helpful.

VICE CHAIRMAN MCDONOUGH. In one respect the Fed is a bank supervisor; in another the Fed as the central bank has some degree of responsibility for financial stability. I think that implies a broader discussion.

MR. BROADDUS. It is the latter context that I had in mind.

MR. MEYER. Our committee will certainly be engaging in a broader dialogue with all of you as we think about this.

VICE CHAIRMAN MCDONOUGH. It sounds as if we have exhausted this interesting subject for now or at least it has exhausted me.

CHAIRMAN GREENSPAN. Unless you get up and run, you will find that you are mistaken. [Laughter] In all seriousness, does anybody have any quick additional issues to raise?

SPEAKER(?). Let's run quickly!

CHAIRMAN GREENSPAN. The meeting is adjourned. Thank you all very much.

END OF MEETING

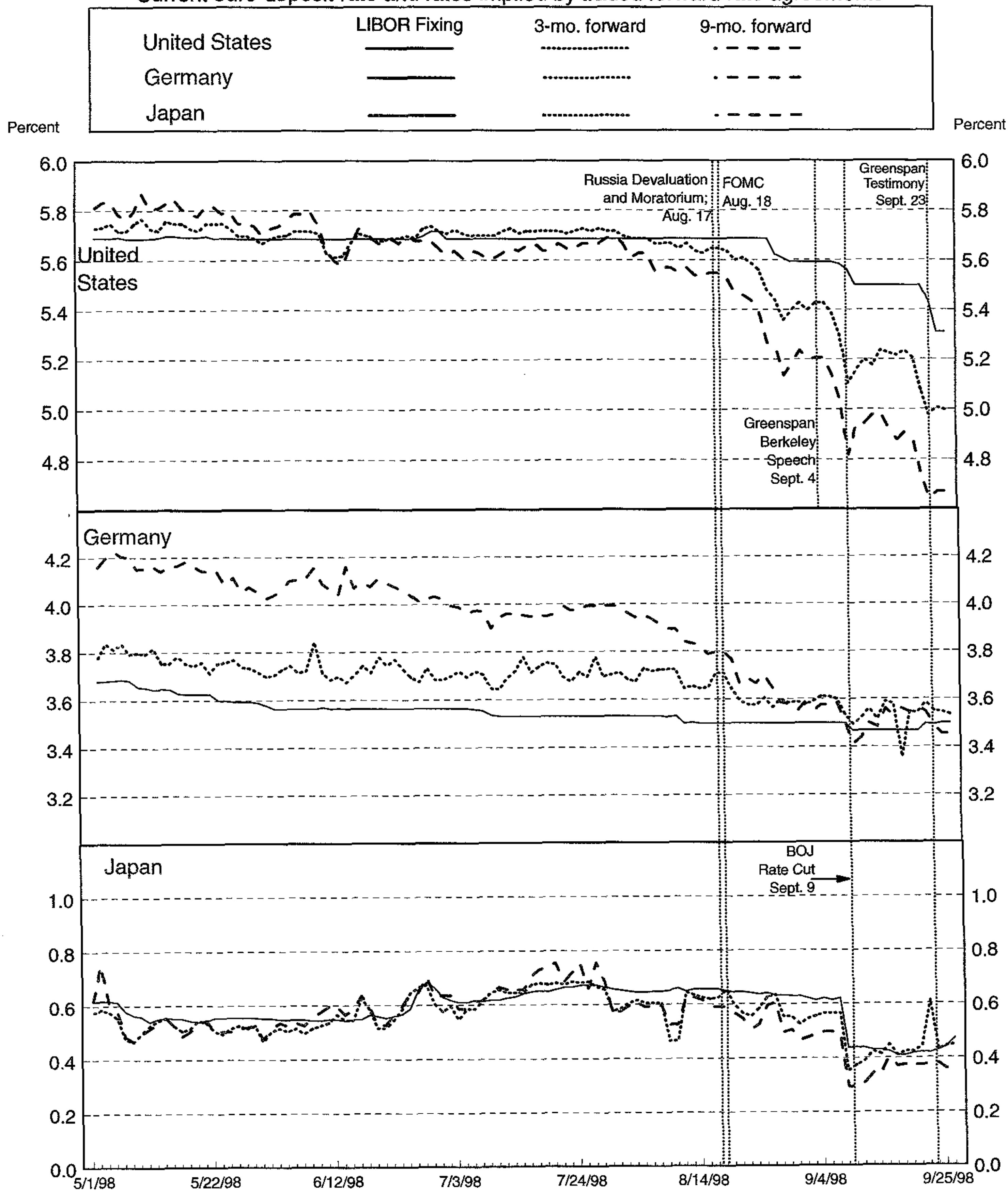
APPENDIX

Charts used by Mr. Fisher in his presentation

3-Month Deposit Rates

May 1, 1998 - September 28, 1998

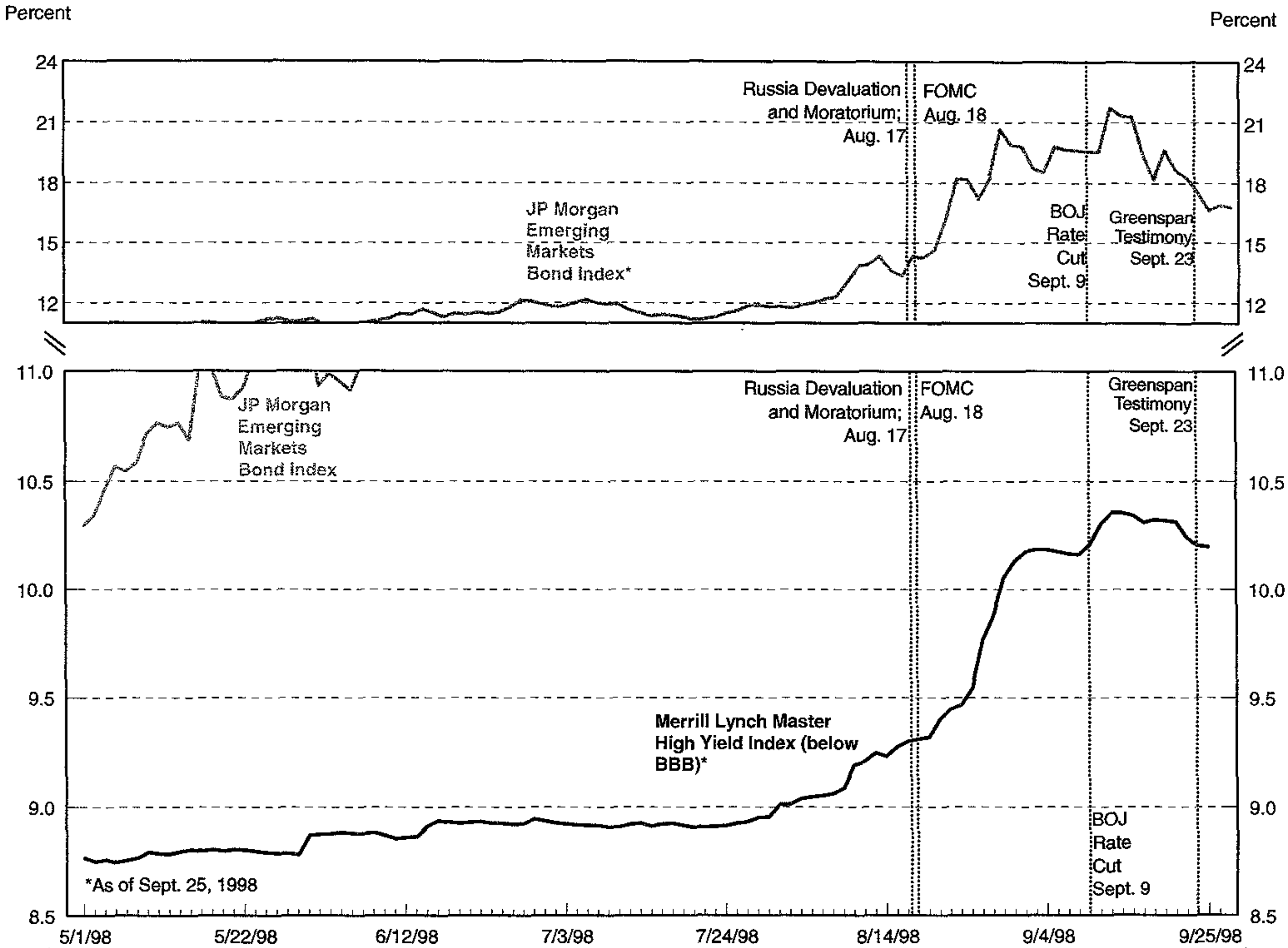
Current euro-deposit rate and rates implied by traded forward rate agreements

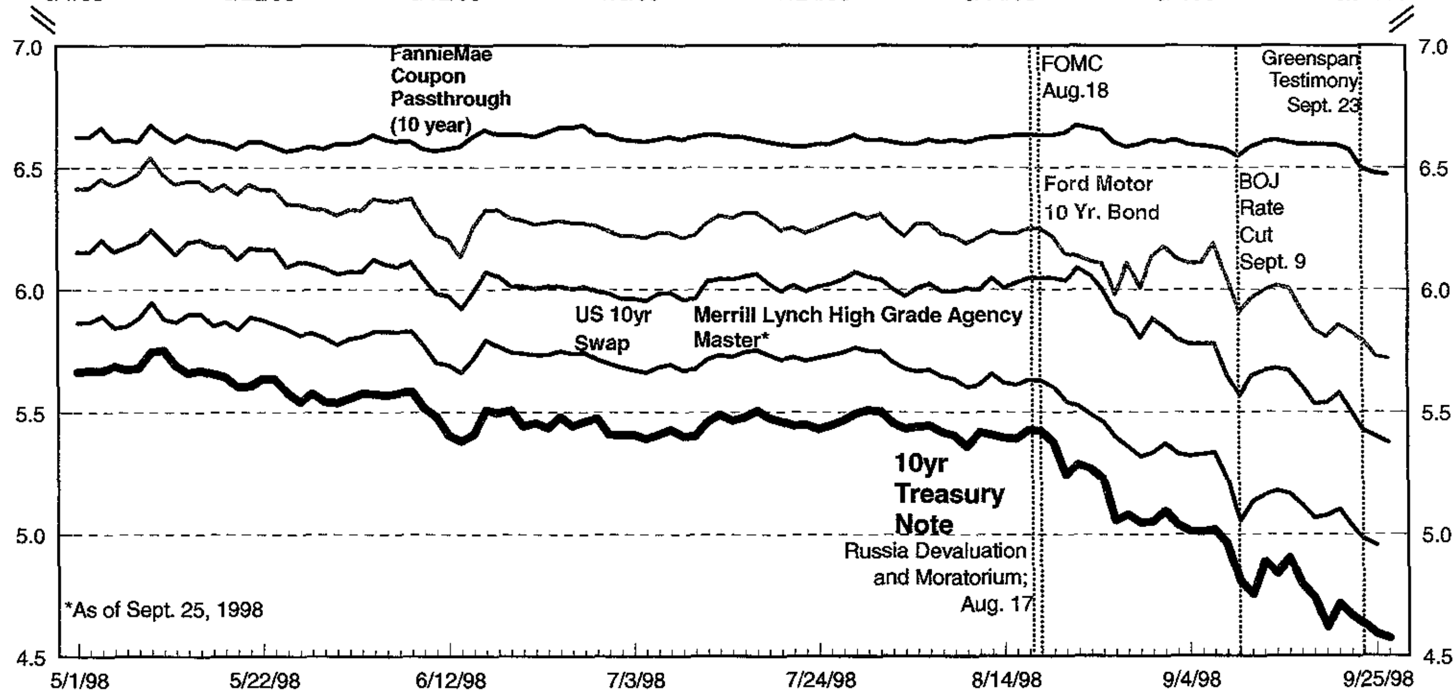


Charts: Nkechi Okoro

Selected Fixed Income Yields

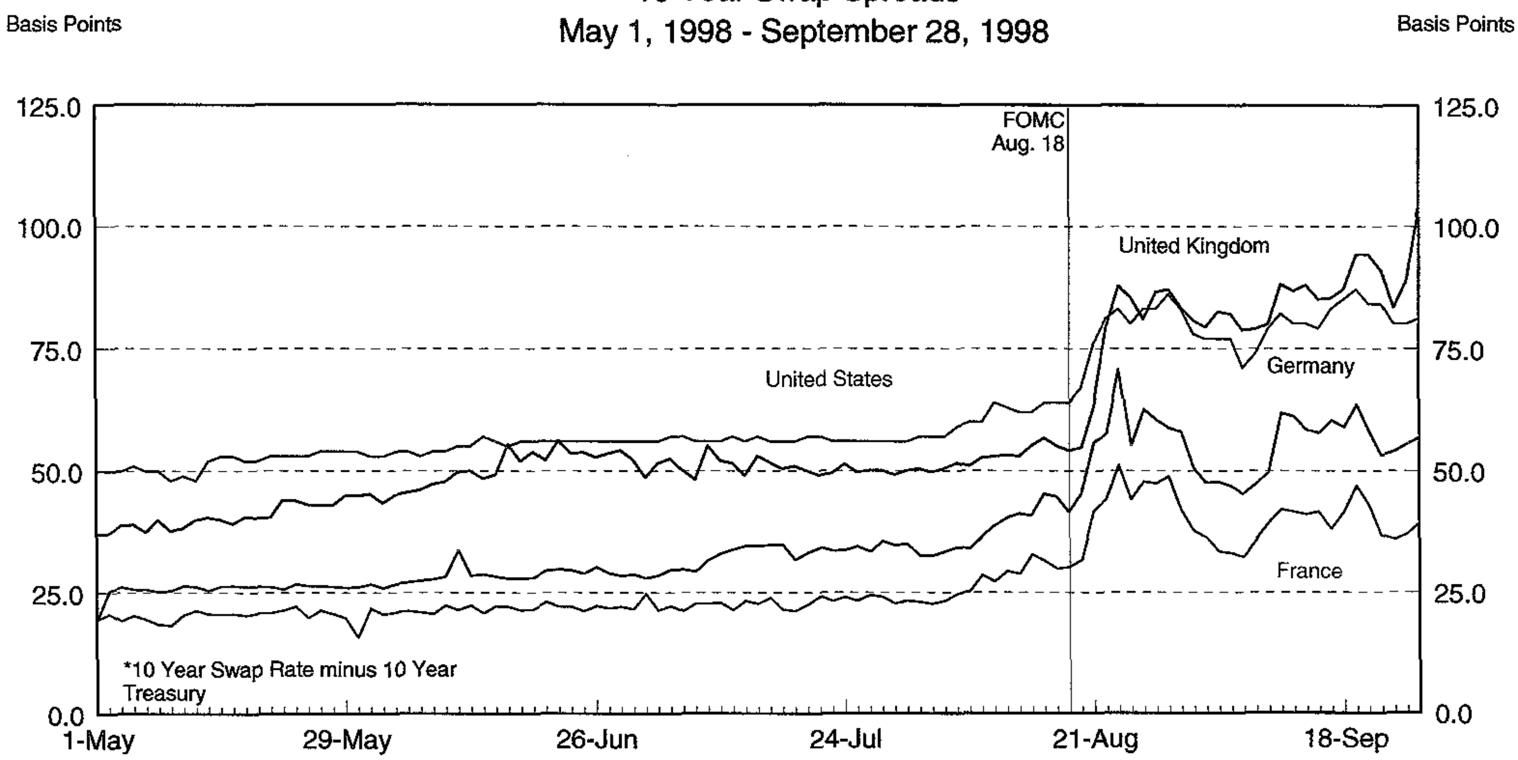
May 1, 1998- September 28, 1998



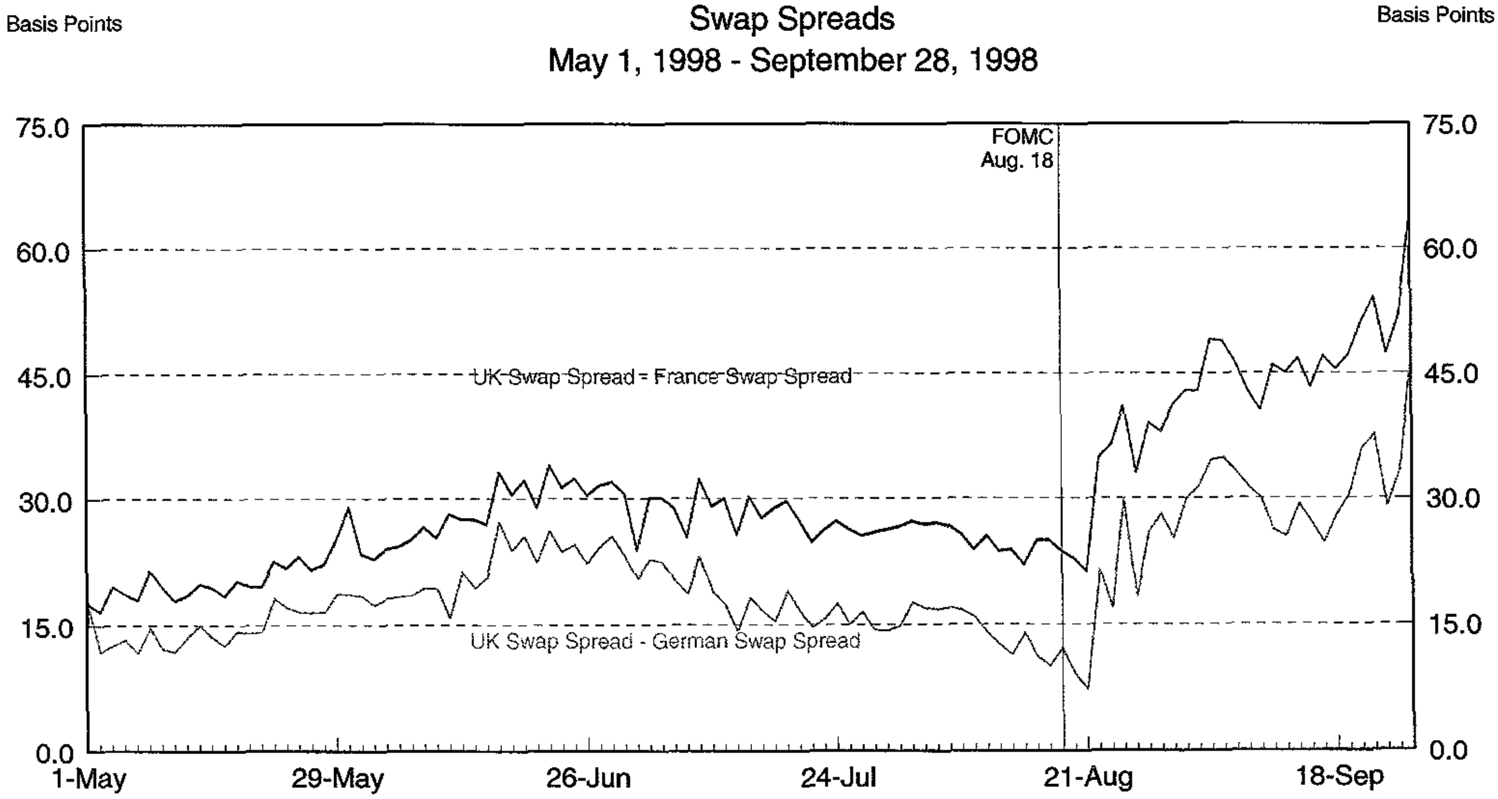


Charts: Nkechi Okoro

10 Year Swap Spreads*
May 1, 1998 - September 28, 1998



Swap Spreads
May 1, 1998 - September 28, 1998

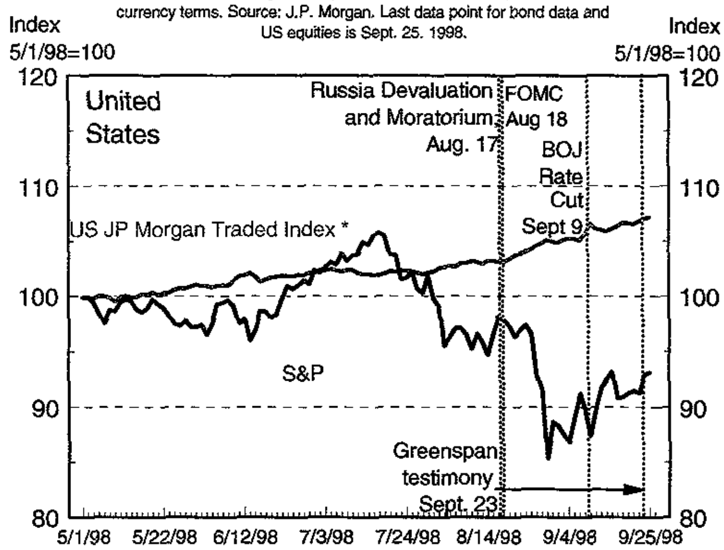


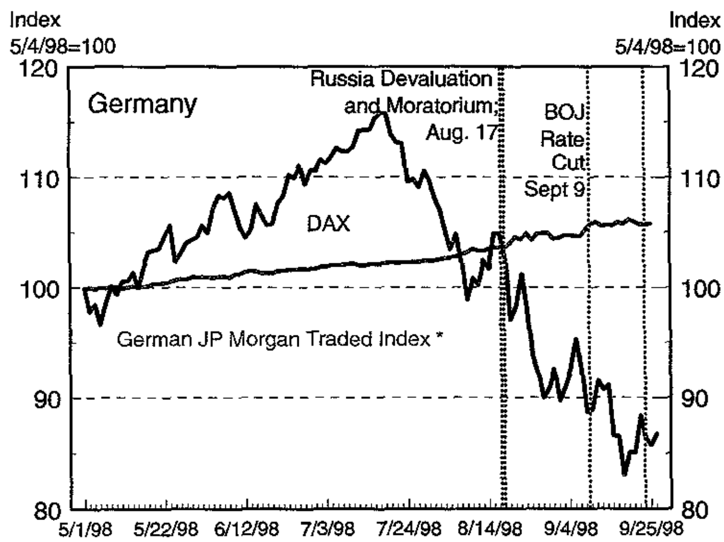
Kevin Cummins
FRBNY Markets

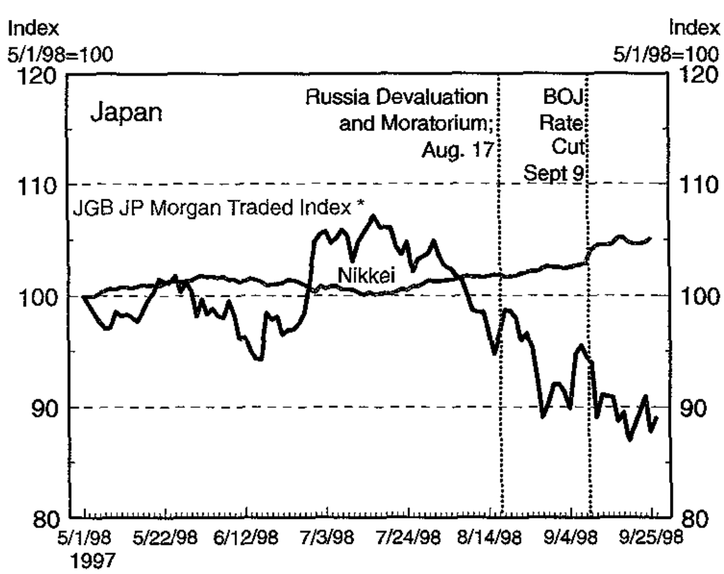
G-3 Equity & Bond Performance

Re-Indexed G-3 Equity Indices and Total Return Bond Indices * Performance (Rebased to May 1, 1998)

* U.S., Germany, and Japan Traded Bond Indices, in local currency terms. Source: J.P. Morgan. Last data point for bond data and US equities is Sept. 25, 1998.



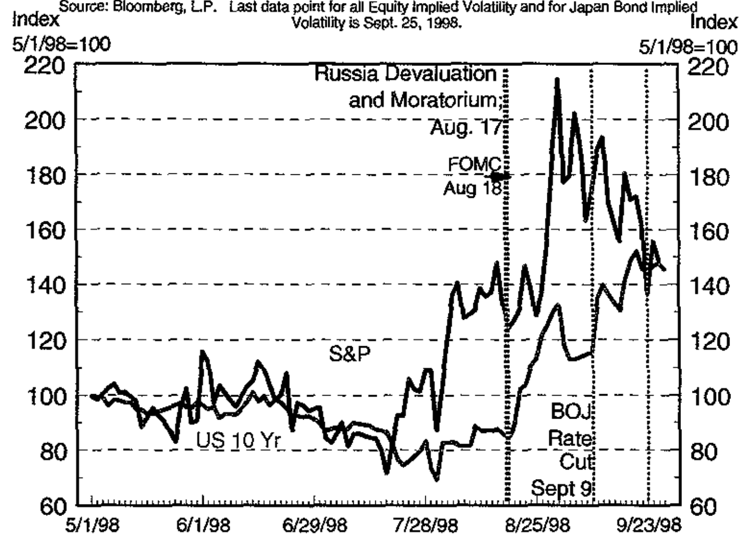


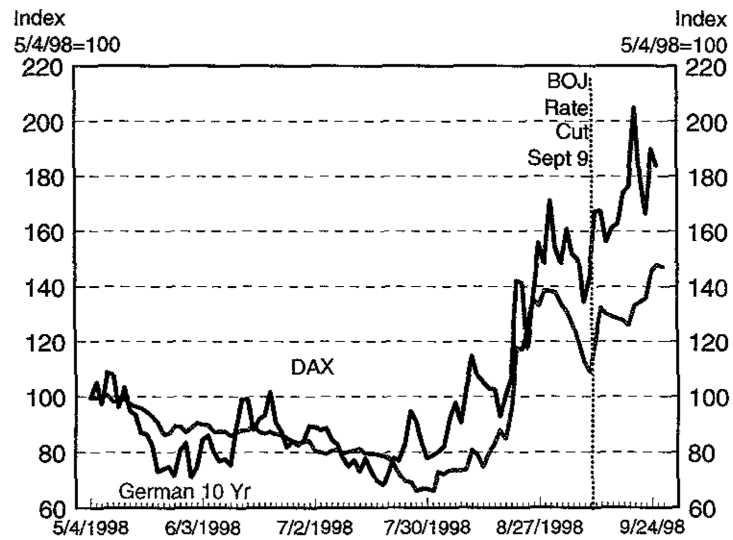


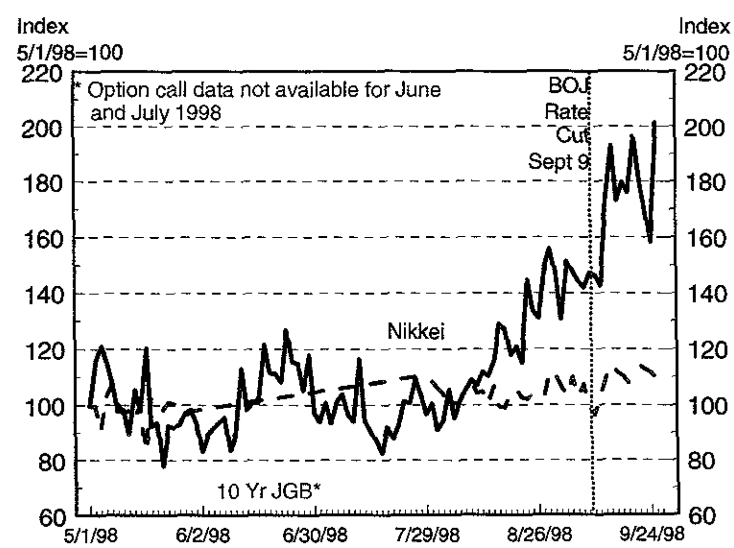
Charts: Nkechi Okoro

Indexed G-3 Option Implied Volatility on Equity and Bond Futures * (Rebased to May 1, 1998)

* Bonds: Implied Volatility of At-the-Money options on futures of 10 Yr bonds. Source: Merrill Lynch & Bloomberg, L.P. Equities: Implied Volatility of At-the Money options on futures of S&P, DAX, and Nikkei. Source: Bloomberg, L.P. Last data point for all Equity Implied Volatility and for Japan Bond Implied Volatility is Sept. 25, 1998.







DAILY FEDERAL FUNDS
TRADING RANGE, EFFECTIVE AVERAGE & ONE STANDARD DEVIATION
August 13, 1998 to September 25, 1998

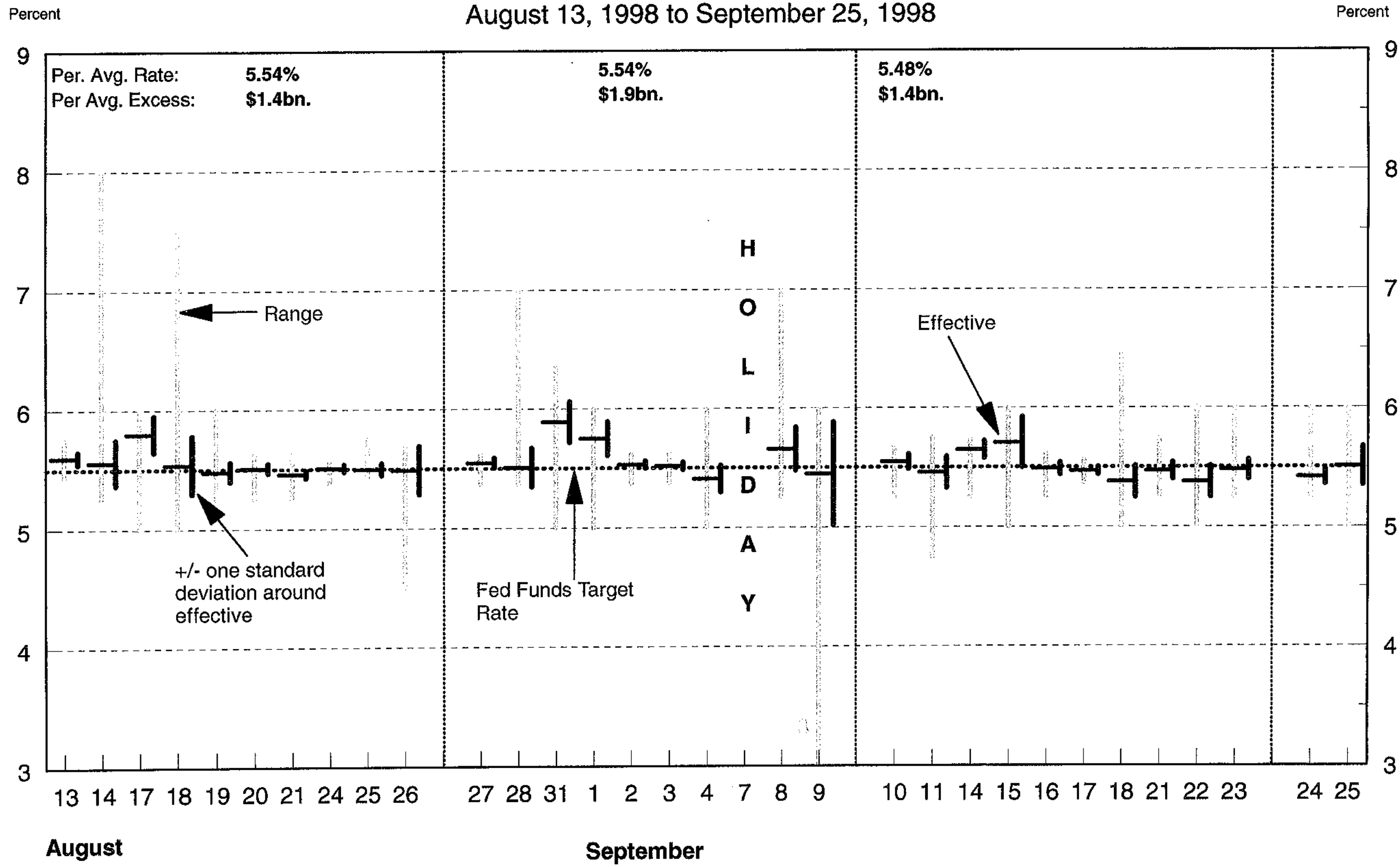


Chart: Angela Goldstein